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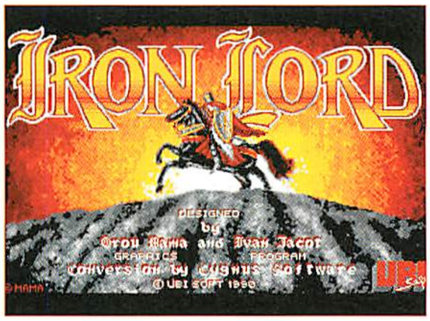
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Managing Editor Pam Turnbull
Editor Steve Turnbull
Assistant Editor Karen Peach
Art Editor Stuart Cripps
Sub Editor Alan McLachlan
Contributors
Dave Acton, Ian Burley, Mike Buckingham, Mike Cook, David Dade, Tony Houghton, Jack Kreindler, Dave Lawrence, Rob Miller, Steve Mumford, Graham Nelson, Geoff Preston, Jill Regan, Greg Scott, Neil Spellings, Paul Wheatley
Group Advertisement Manager
Elaine Prescott
Account Manager Ian Antrobus
Account Executive Carl Jackson
Ad Production Barbara Newall
Ad Typesetting Eddie Burke
Marketing Manager Steve Tagger
Marketing Assistant Jane Comber
Production Manager Alan Capper
Circulation Director David Wren
Distribution COMAG (01895) 444055
Subscriptions & Back Issues
Database Direct 0151-357 1275
Email: database@dbdirect.demon.co.uk
Managing Director Ian Bloomfield
Cover Jack Kreindler / Stuart Cripps

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Acorn unveil Samsung licensing deal

This month sees a slew of important announcements from Acorn. The first comes from Korea's largest electronics company, Samsung, who have signed a licensing agreement for Acorn TVCentric technology, including the use of RISC OS. Acorn's press release predicts that hundreds of thousands of Samsung products will use Acorn's technology, bringing low-cost, state-of-the-art devices to thousands of homes around the world.

The idea is that Samsung's consumer appliances will be RISC OS-enabled and you will be able to use an ordinary television set to monitor them. Acorn's TVCentric technology is designed to make the most of a conventional standard resolution TV for displaying computer information, graphics and full motion video. System software including graphics libraries, font and graphical user interface technology is included in the agreement.

Daniel Oh, manager of the Samsung Next Generation Platform Group explained, 'We need to work with flexible people who can offer us the technology we need at the right time. Acorn TVCentric technologies are ideally suited to consumer devices which use TV-based displays.' He added that a key advantage Acorn had was their ability to bring products to fruition very quickly as much of the technology was reality and not theoretical.

Technologies provided by Acorn as part of the deal include anti-aliased scalable fonts for high-definition text, anti-twitter software for stable text, images and video, software programmable video resolution, colour depth and scan rates, plus graphics overlay support including semi-transparencies.

Mark Phillips, technologies marketing manager for Acorn, added, 'This agreement is further evidence of Acorn's success in providing technology to the global consumer electronics market. It shows once again that Acorn's operating systems and applications software are ideally suited for consumer devices being produced by major corporations. Acorn are again successfully licensing their technology to a major player. Samsung have a history of only choosing the best technologies to incorporate into their products and this has contributed to their dominant position in the Korean electronics market and we are pleased to be part of their portfolio.'

Acorn launch LanTV in New York

As we went to press, Acorn announced their new *LanTV* package in New York. LanTV, a registered trademark, provides full-screen MPEG2 and/or MPEG1 digital video across Local Area Networks (LANs). This latest Acorn digital TV technology is aimed primarily at corporate intranets, localised entertainment systems (hotels, cruise ships etc.) and educational applications where interactive access to a digital resource library is valuable.

LanTV packages Acorn's established hardware and software technologies which maximises the ability of low-cost displays, like domestic TV sets, to display computer information and multimedia. Support is provided for Ethernet (10Base-T) and ATM Forum LANs, as well as European PAL and North American NTSC TV standards.

Kevin Coleman, head of communications at Acorn, commented: 'LanTV is especially designed for people who want high-quality, interactive video and graphics across their local area networks. It will be very useful for high-quality video conferencing, interactive company training sessions and will allow large corporates to give their people easy access to video resources within digital libraries.'

The first LanTV client device is, unsurprisingly, Acorn's very own STB22 set-top box. Acorn are promising that future LanTV clients will feature StrongARM power and could be built into TV sets.

LanTV is based around a core software component which is HTML 3.2 (Web) based and called the LanTV Baseline pack. This consists of server-mounted software which enables the client to boot and also to work correctly with the video server. In other words, MPEG video can now be played back in a frame or window on a Web page.

There was no mention of partner companies in the LanTV initiative, though time was too short to investigate the news more fully. If there is any more to report, we will bring it to you next month.

BT trial Acorn NCs

Acorn's relationship with BT has probably not been as close as they would have liked. For example, BT were largely faithful to Apple-produced set-top boxes for their interactive TV trials, much to the frustration of Acorn's now-defunct Online Media division. However, Acorn could be on the verge of a new and prosperous relationship with them after all, with the news that BT are to use Acorn Network Computers (NCs) as part of a consumer trial for network computing. The trial uses BT's telecommunications network and Acorn NCs and is centred around BT Laboratories (BTL) at Martlesham Heath in Suffolk.

Chris Wheddon, director of BT systems engineering, said, 'This project will be testing one of the most talked-about ideas in the IT industry over the past year – the Network Computer. Our aim with this trial is to prove the technology and services over a six month period, ending in March 1998, with a base of 500 users.'

Acorn's managing director, David Lee, commented, 'This is a significant development in the life of the network computer. BT are one of the world's leading telecommunications organisations with a rapidly growing marketplace and product portfolio. At Acorn we are already seeing that television is changing from a reactive entertainment forum into a fully interactive way of accessing information and, with the network computer, we are meeting the challenge of providing it at a low cost. With BT's experience in developing consumer-oriented content and our technology, this trial is destined for success. Network computers are so easy to use and this trial will help consumers get some hands-on experience of what they can do.'

Services available to trial users will be aimed at both personal and small business customers. These services will be split into a number of specific areas including information services, communications services, access to the Internet and software distribution. Local community interests will feature strongly, covering topics like clubs, association and guilds, business process/service support and local news and information services. Phase one of the trial will involve 40 users. By the end of the year 500 users will be hooked up to the trial in the Colchester and Ipswich areas.

The BT trial will involve a network distributed over conventional phone lines. One major weakness of the potential for consumer success of Network Computing is that even the fastest modems are unlikely to deliver information at a fast enough rate to satisfy users. Both BT and Acorn have experience in the field of digital interactive TV and it will be interesting to see if technologies related to this will find their way into the BT NC trial. These technologies include Asymmetric Digital Subscriber Line (ADSL) to squeeze data down ordinary phone lines at 20-30 times the rate of a fast conventional modem. This would enable lightning quick World Wide Web access plus broadcast-quality video and CD-quality audio playback and maybe even video-conferencing services as well. Whatever happens, it's heartening to see Acorn and BT working so closely at last.

news

Acorn partner heavyweights in infotainment push

Acorn are to partner IT industry heavyweights Digital, Ericsson and Oracle in a bid to sell high-bandwidth video and Internet/intranet access for telephone companies, cable TV operators and Internet service providers.

The four players are offering a tailored package including Acorn set-top boxes and Oracle server software. It features ATM (asynchronous transfer mode) technology for networking multimedia-rich services which the four hope will generate attractive revenues from users. Part of the appeal will be the combination of Web access with mass market TV distribution.

Subscribers will be able to search, select and view interactively a range of "infotainment" services including news, movies, information and educational programs using Internet technology. For the first time, services will include full-motion MPEG-2 video delivered over ATM. MPEG2 is a second-generation digital movie standard which delivers audio and picture quality which can exceed that of VHS video.

Acorn STB 22 set-top boxes, connected to customers' television sets, will be used by customers to browse the Internet. They will also be able to search content, including video material, from dynamically created Web-based menus. Acorn's STBs will be fed by Digital AlphaServer hardware which will be used to run Oracle Video Server software through an multi-node ATM Ericsson network infrastructure.

What's interesting about this particular announcement is the combined effort. Few of the packaged ingredients are brand new, but the high-octane value of the partners making up the offering will surely make prospective buyers of the technology sit up and take notice.

Psion unveil ARM-powered Series 5 pocket computer

That Psion's successor to the hugely successful Series 3 and Series 3a/3c, plus the directly related Acorn Pocket Book, would be ARM processor powered was an open secret for many months. However, we now know all the information to illuminate the more closely guarded secrets of the Psion Series 5.

For a start, Psion have skipped the Psion Series 4 generation because the number 4 is considered unlucky in some cultures. The Series 5 is a evolutionary development of the concepts which created the Series 3 family. Series 3 users will most likely feel very much at home with a Series 5, but that assumption fails to give justice to the more revolutionary improvements inherent in the Series 5 over its illustrious predecessor.



The Series 3's old 8MHz 16-bit processor gives way to an 18MHz ARM 7100 integrated processor and multi-function chip, manufactured by Cirrus Logic, which is arguably 20 times faster than its predecessor. The operating system is now Psion's EPOC32 32-bit platform and while it's not directly compatible with old Series 3 OPL programs, these can be recompiled with minor changes to the source code in order to work on the new Series 5.

A touch-sensitive back-lit screen with a 640 pixel width is now employed in the Series 5 compared to the Series 3a and 3c's 480 pixel screen. Although you can operate the face-lifted windows-style graphical user interface using the pen interface, there is no handwriting recognition facility. Psion had been singing the praises of voice recognition over handwriting recognition, but on this model at least you will have to use the keyboard for input. Luckily, the keyboard is now about as good as it is going to get on a palmtop computer, with practically full-sized keys which have a generous travel and commendably little wobble.

Other notable features include another award-deserving clam-shell case which slides the screen and keyboard into a balanced position to enable secure use of the keyboard and pen operation. Then there are external digital voice recorder controls enabling you to use it for dictation while the case is closed. The recording system is much more efficient than before, requiring just 1Mb per four minutes of recording. The top model has 8Mb of main memory and an external flash memory cartridge can store 10Mb of data or around 40 minutes of audio. The serial port and the infrared port now operate at 115.2K bits per second.

Having spent half an hour playing with a pre-production prototype, it's not difficult to be enthusiastic about the Series 5. Even the price looks reasonable at £440 for the 4Mb version and £500 for the 8Mb alternative, both prices including VAT. There are a few niggles – lots of interesting software for the Series 5, like Internet mail and Web browsing, is not yet ready, but at least PC synchronisation utilities are now standard items. Will the Series 5 end up badged 'Pocket Book' with an Xemplar or Acorn logo on it? Who knows? Let's hope so!

Acorn adjust their name

Acorn Computer Group plc have changed their name to the Acorn Group plc. An Acorn statement explained the change is in recognition of the company's new business focus. A large part of Acorn's effort now goes into technology licensing. The name of Acorn Computers Limited remains unchanged for the time being.

New version of slide show program

Jochen Lueg has released version 1.75 of *Showpic*, a slide show program. Features include a user-programmable display time and blend time, which can be saved for later re-use. Showpic can display any image filetype supported by *ChangeFSI* as well as Kodak Photo CDs. There is also a caption editing feature. You can e-mail Jochen at tudor@argonet.co.uk or lim.college@argonet.co.uk or download Showpic from the Web at: http://www.argonet.co.uk/users/tudor or http://www.argonet.co.uk/users/lim.college

Free joystick offer

Stuart Tyrrell Developments are offering a free joystick with their Solo joystick interface. The Solo interface allows the use of a single 'Atari-style' joystick with Acorn machines. The freebie joystick is a Cheetah 125+ worth £6.95. STD say the offer is limited and will last as long as stocks last.

The Solo interface itself is priced £14.95 inc p&p. Contact Stuart Tyrrell Developments: PO Box 183, Oldham, OL2 8FB, e-mail: info@stdevel.demon.co.uk

Acorn World '97 Web site

This year's AW show now has an official Web site at: http://www.argonet.co.uk/acornworld97/ It lists booked exhibitors and adds links to their Web sites where applicable — exhibitors can also set up their own page on the site. Look out for an advance tickets competition due to be announced soon. For more info, contact Barry Ricketts, e-mail: acornworld97@argonet.co.uk, or write to Shared Vision, Chalkpit Lane, Monxton, Andover, Hampshire, SP11 8AR.

Disc examiner utility

John Kortink has released version 1.27 of his freeware utility called *DiscInfo* replacing the recently released, but faulty, version 1.25. The utility provides extensive info on discs that reside under a FileCore based filing system. As well as a numerical dump of disc data a graphical data map view can be selected. The utility is aimed at experienced programmers who will need to refer to Acorn technical manuals to make sense of the data. Download it from www.inter.nl.net/users/J.Kortink

ZeriLink goes freeware

ZeriLink 2.41, formerly shareware, the Acorn/PC parallel port file transfer utility, capable of data rates of up to 800K per second, has been made freeware by author John Kortink because hardly anyone registered it. One feature not present in this free version is a WIMP interface and Kortink says he won't be developing the software any further. The only requirement for ZeriLink is that both machines need to have a parallel port that supports either ECP (Extended Capabilities Port) or PS/2 ('bi-directional') modes of operation. Available at: www.inter.nl.net/users/J.Kortink

Dr Wimp 3 released

Andrew Ayres has released version 3.00 of *Dr Wimp*, a freeware BBC Basic-based desktop application generator. Download it from http://whirligig.ecs.soton.ac.uk/~ aij295/groover The file is just under 800K in size and includes a file containing 90 pages of documentation. Improvements include the addition of printing, more example applications and a new version of a feature called *Func'n'Proc*.

ARM yourself with a software modem

ARM Ltd have unveiled *ARM SoftModems*, a range of software technology which reduces the cost and complexity of modem solutions by enabling an ARM-based CPU to perform all data and fax modem functions. ARM say that the SoftModems idea targets a variety of embedded modem applications including smart phones, set-top boxes, network computers, screen telephones, digital cameras and pocket computers or PDAs (personal digital assistants). Psion have confirmed that their engineers are exploring SoftModem technology for their new ARM-powered Series 5 palmtop computer (see other story).

ARM SoftModem software removes the need for an additional microprocessor and DSP (digital signal processor) for the modem functions, providing power consumption and design size advantages. By shifting the modem functionality from the hardware to the software, the ARM SoftModems also simplify upgrades to new modem standards, for example from 28.8K bits/sec to 33.6K and up to 56K – all you need is a new software driver.

'As designers of the ARM architecture, our expertise with ARM-based silicon has allowed us to optimise the ARM SoftModems for performance, power consumption and system cost,' said Dave Walsh, business manager of ARM Software Systems. 'Our software, when combined with the unique advantages of an ARM-based CPU, provides embedded systems designers with a flexible, high-performance, small-footprint modem solution.' ARM Softmodems support both the ARM RISC architecture – ARM7, ARM8, StrongARM, etc. – and ARM's Piccolo DSP co-processor and the software is available now.

ARM-based education from a new viewpoint

More than half the primary and secondary schools in the land have ARM-powered Acorn computers of one sort or another, but Acorn have never really succeeded in cracking the tertiary sector, except in the niche areas of scientific and workstation applications.

ARM Ltd may be well on the way to correcting this vacuum through their newly announced programme to encourage universities to adopt the ARM processor architecture as the preferred platform for teaching microprocessor principles.

ARM processors are ideal for teaching low-level programming and the platform is at last endowed with a generous set of high-level language development tools as well. It can be used to illustrate real-life examples including interrupt handling and task switching. It also has some interesting features such as fully conditional instructions and a barrel shifter on one input to the arithmetic logic unit (ALU).

Universities would effectively be spreading ARM's word for them, so the ARM is making the university software toolkit available free of charge, downloadable from the Internet. The toolkit includes a C compiler, assembler, linker, simulator and debugger. This can be used for practical sessions which demonstrate compiling and debugging of high-level code, performance analysis and code optimisation. Host platforms include Windows 95, NT and Sun OS 4.1.3.

To complement the free software, universities can also purchase a selection of ARM-based development cards or indeed commercial development kits comprising both cards and software tools.

For further information, check out the University Program Download Area on the ARM Ltd Web site at http://www.armltd.co.uk

Get connected

How about splashing out and surfing with the new NetStation? Argo Interactive are a recommended ISP for the new Acorn NetStation and as well as providing connectivity and services for network computers, they also supply the NetStation with built-in modem, infrared controller, and with Zip drives with 100Mb cartridges for offline use.

Argo have also launched a "Get Connected to ArgoNet" pack. As well as the easy-to-use Internet access software, *Voyager*, there is a fast external 33.6K voice/fax/data modem and three months online with ArgoNet. The entire pack only costs £99 inc VAT and comes with three months unlimited ArgoNet access at local UK telephone call rates, freephone technical support, voicemail software and a headphone/microphone set.



ArgoNet access at the end of the first three months costs from only £10 ex VAT per month for unlimited usage, with 5Mb Web space and up to 5 e-mail addresses.

For more information, contact Argo on 01243 815815, e-mail enquiries @argonet.co.uk, WWW: http://www.argonet. co.uk

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Acorn Network Computer

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IDE interfaces etc

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Removable Hard Disc Fitting Kit for Risc PC 5¼" bay	ICS	23.50	£20
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CD rom software

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Britain Since 1930 (Anglia), KS2,3 (needs Keynote/Key Plus)	Anglia	28.20	£24
British Birds, age 7-16	YITM	91.65	£78
British Isles from the Air, KS2-4	Anglia	43.48	£37
Cars - Maths in Motion CD, age 8+	Cambs Soft	45.83	£39
Clip-Art CD 1	CC	19.98	£17
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Dinosaurs (MS)	IMS	43.48	£37
DTP-1 Clip Art CD	APDL	17.63	£15
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Oxford Talking Infant Atlas CD, offer, KS1	Sherston	17.63	£15
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PD-1 CD (Utilities)	APDL	12.93	£11
PD-2 CD (Games, Novelties)	APDL	12.93	£11
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PDCD-2	Datafile	18.80	£16
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Photobase Decades: The 1960s	Longman	52.88	£45
Photobase Decades: The Victorians, offer	Longman	45.83	£39
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Understanding Energy, KS3	Anglia	45.83	£39
Understanding the Body, KS3,4	Anglia	36.43	£31
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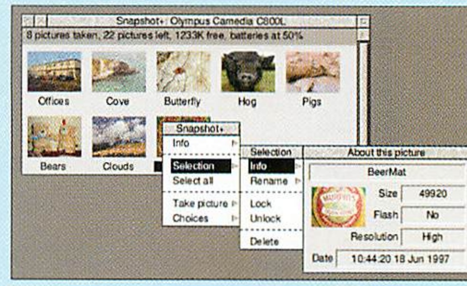
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Irlam update Plus generic digital camera driver

Irlam Instruments have updated their generic digital camera driver, *Snapshot+*. This latest version now supports most popular digital camera models produced by Epson, Olympus and Sanyo. Irlam report that the new driver now boasts a true filer-like display, integrated image processing tools, expanded file format support and caching to minimise camera download times.

The most enthusiasm for Snapshot+ has been reserved for a new facility for replaying time lapse sequences as Replay movies independently of the camera. Included in the price of Snapshot+ is the imaginatively named *'Album'* application which can be used for cataloguing digital photos as well as clip art.

Snapshot+ is priced £49+VAT or you can get it free by buying a digital camera from Irlam Instruments directly. Irlam Instruments can be contacted at tel/fax: 01895 811401, e-mail sales@irlam.co.uk



Apple spin off Newton subsidiary

Apple Computer, the troubled makers of the Macintosh family of personal computers, have announced that their Newton subsidiary, which makes ARM-powered intelligent computer appliances, will become a fully independent company. The Newton division has been the home of some tremendously innovative and daring technology since its formation some six years ago, but it has also performed well below expectations at a commercial level.

The strategy forced upon the Newton team will mean they must survive or die – it is unlikely that Apple will bail them out should the new company encounter further financial difficulties. The signs are too bad for Newton technology – the new StrongARM-powered MessagePad 2000 has reportedly exceeded sales targets in the UK, and Apple is so committed to the newly launched eMate 300 Newton for schools that it retains exclusive rights to that particular Newton product.

Apple created the Newton division with the vision of delivering compact and versatile computer devices which could react intelligently to the habits of their users. The philosophy also depended heavily on non-keyboard input, namely handwriting recognition. However, the first Newton MessagePad model was brought to market far too early and handwriting recognition performance, combined with software unreliability, dented the Newton's reputation early on.

Purists maintain that the Newton is the sole guardian of the true PDA or personal digital assistant ethos, but fans are desperate for the company to produce a smaller and cheaper device with which they can evangelise a cynical world. This prospect may be dimmed by Apple's announcement that the, as yet, unnamed new company will concentrate on corporate mobile solutions. Newton products have otherwise fared better in vertical market applications, including on-the-scene police information gathering and similar mobile applications.

Xemplar launch the eMate 300

Coinciding with news that Apple are distancing themselves from the Newton subsidiary, Xemplar have confirmed that the Newton eMate 300, previewed at the end of last year, will go on sale in the UK shortly. The eMate 300 is a relatively affordable, portable Newton which was designed specifically for classroom use and beyond.



At approximately £500, depending on introductory offers and class-pack discounts, you get a lot of computer for your money. The eMate 300 can accept both pen input with handwriting recognition as well as more conventional input via its built-in keyboard. As the eMate 300 does not need a hard disc drive and has very power-frugal ARM-based circuitry, it can operate for tens of hours off one battery recharge.

The eMate 300 is slightly larger than a conventional PC notebook portable, but has a built-in carry handle and a clever rounded case design making it resistant to impact damage. Henry Howarth, Xemplar's product marketing person in charge of the eMate 300, demonstrated the its robustness by deliberately dropping his personal example onto a carpeted floor from about chest height – it survived the experience admirably.

Xemplar don't think there is a question mark over the Pocket Book now that the eMate 300 is on sale. Both are relatively inexpensive portable solutions aimed at schools with the ultimate goal of providing one computer per student, but Xemplar think some schools will prefer one solution to the other and vice-versa.

The eMate 300 has file synchronisation utilities for Windows PC and Apple Mac desktop PC connectivity, but not yet for Acorn RISC computers. Brendan O'Sullivan, Xemplar's managing director, felt unable to promise that the necessary investment required to develop an Acorn to eMate 300 link package was guaranteed. Instead, Xemplar would see if Acorn schools had enough Risc PCs with PC Cards running Windows to satisfy file transfer needs.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

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For the price of a 14" SVGA Multiscan Monitor (AKF60)**
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StrongARM 200MHz Risc PC



Options and upgrades available at excellent prices. Please phone for our full listing. All hardware upgrades fitted free of charge. Have your Risc PC system tailor-made to meet your requirements. All systems supplied with 1 year warranty including 1 year free technical support.

Risc PC 4Mb HD1.2Gb/AKF60 . . . . £1415.32
Risc PC 4Mb HD1.2Gb x8CD/AKF60 . . . .£1465.33
Risc PC 10Mb HD1Gb/AKF60 . . . .£1715.32
Risc PC 10Mb HD1Gb x8CD/AKF60 . . . . £1765.32

NEW Acorn A7000+



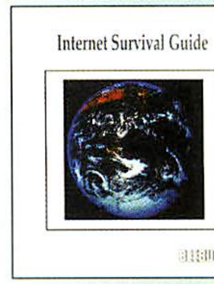
This is the first production Acorn computer with an integrated Floating Point Accelerator. The combination of a fast 7500FE processor and high-speed EDO DRAM give a dramatic improvement in desktop performance, but with no increase in price! The A7000+ offers: 8Mb EDO RAM, 1.2Gb IDE hard drive, RISC OS 3.71, Floating Point Accelerator, Integrated 16-bit digital stereo sound, 1.6Mb floppy drive, VGA, SVGA, and other resolutions

A7000+ 8Mb HD1.2Gb £1099.00
A7000+ 8Mb HD1.2Gb 8xCD £1199.00

Internet Service

We have initiated a complete set up service. Send or bring your computer to us and we will return it all set up ready to access the Internet, send emails, and surf the Web.
What you'll get:

- An account with Demon Internet
- USR 33,600 external modem
- Internet accessing software
- Email accounts for up to 9 users
- Up to 5Mb of Home Page space available
- Your own Home Page created
- One years unlimited access to the Internet, Email, WWW
- Your computer completely configured ready for use
- Internet Survival Guide
- Free 'get you started' help line for 10 days



Subject to demand we will return your computer to you within 3 working days (from our receipt of your computer), at £15 for 24 hour insured courier delivery.

All we need from you are some basic details and Home Page text and layout. Please telephone us for further details and an Internet Service Order Form.

We can configure any Acorn computer that meets the following specification: 4Mb RAM, Hard Disc with 10Mb free, RISC OS 3.1 or later, working serial port.

Code INTAg Internet Service £525.00 inc VAT

PC Internet Service also available

Acorn Network Computers ONLY £468



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All prices inc VAT Courier delivery £11.75**

New products / upgrades

Product	New features/Product details	Price	Contact
Schedule+ version1.0	* Personal organiser * Includes Todo list * Alarm system launches apps * Convenient notepad * Supplied with OfficeBar (program launcher/ AudioCD player)	£12.99 until August then £16.99	X Developments Tel: 01978-264929
The Robert Duncan Cartoon Kit	* Interactive guide to cartooning on CD-ROM * Fun way to learn basics of word and picture combination * Over 500 images with 100+ captions	£29.78 + VAT	Logotron Tel: 01223-425558
Photodesk 2 – German Edition	* New manual * Set of German language resources	Existing registered users of English version can purchase manual & resources direct from Orcom	Orcom Systemhaus Wolfen Leipziger Str 70 06766 Wolfem Tel: 03494 695-0
PDCD2	* Nearly 900 indexed freeware/PD/shareware/commercial demo applications * Includes very recent software	£15 or £10 to members of The ARM Club (cheques payable to The ARM Club)	The ARM Club FREEPOST ND6573 London N12 0BR

A7000+ review amendments

It appears that the A7000+ we reviewed last issue had items of software present which are not actually on the standard A7000+.

Dave Walker from Acorn sets the record straight, 'Principally, a standard A7000+ does *not* ship with the following – Nested Wimp, Replay 3 or Java. However RISC OS 3.71 *is* the standard production ROM build for these machines – 3.71 is effectively 3.70 with the code from the softloadable 3.70 ROM patches built-in, and with 7500FE awareness added.'

Dave goes on to explain about !X and Windows, 'The version of !X which was running on the system was completely out-of-the-box and unmodified other than its configuration to recognise our network environment (as per standard !X instructions).

There exist a number of third-party bolt-ons for WindowsNT such that Windows API calls relating to screen display, keyboard and mouse input are translated into the equivalent X API calls; thus a WindowsNT box equipped with such a bolt-on can export all its applications as xclients to the network at large, and a standard X server can interact with these applications using the standard X protocol set.

'This is what was being done when the AU reviewer was testing; !X remains conformant solely to X11R4 with R5 font extensions, and at Wakefield there was a WindowsNT portable equipped with one of these bolt-ons hidden inside one of the stand modules.

'An Intel-based WindowsNT box doing this kind of application serving isn't up to doing fileserving too; if people want to go for this, they would need a dedicated server — although the bolt-on software isn't cheap.'

The price of the A7000+ should have read: starts at £807.66 (ex VAT).

GREEN PAGES

The entries below in the Green Pages last month should read as follows:

UTILITIES

Crow Associates 01600 772532
*Author and supplier of **MenuBar, Tiger** and other popular products. MenuBar provides bars of pull-down menus, and Tiger offers a window in which you can enter extended descriptions of files. They each cost £15 (no VAT) and demo versions are available.*

DESKTOP PUBLISHING/EDUCATION

Mijas Software 01962 774352
***L J Duplex** is the utility for double-sided printing on Hewlett Packard Duplex printers – standard and professional versions are available. BTC Print enables multiple-copy background printing to any inkjet. ArcSimp is a flexible mechanical / mathematical / analogue / digital system simulator for educational or professional use from £55.*

ENTERTAINMENT & LEISURE

Werewolf Software 0181-467 1138
***E-mail:** info@werewlf.demon.co.uk*
***WWW:** http://www.werewlf.demon.co.uk/*

The following ad should have appeared in the Networking section:

NETWORKING

Atomwide 01689 814500
*We offer expert guidance to all Acorn users wishing to access the Internet. Offering everything from the award winning **ANT Internet Suite** and US Robotics modems for Acorn computers, to fully-featured Internet/intranet server-based solutions using ISDN or leased-line connection for mixed platform networks, Atomwide invariably has the answer.*

Apologies for any inconvenience caused.

NEW! - Epson Digital Camera

High resolution, 24 bit colour digital camera

- High quality colour digital camera - as easy to use as a conventional 35mm compact.
- 24 bit colour sensor providing 16.7 million colours.
- Optical resolution of 640 x 480 pixels - twice that of many other comparably priced digital cameras.
- Connects to RS232 port - no interface to fit.
- Built-in four way flash - automatic, always, never, and red-eye reduction modes.
- Self-timer, erase last/every picture functions.
- 37mm thread accepts camcorder lenses and filters.
- Standard 2Mb memory stores up to 60 standard resolution (320 x 240) pictures, or 30 high resolution (640 x 480) pictures, or any combination.
- Optional 2Mb and 4Mb memory upgrades, which allow up to 200 pictures to be stored.
- Tripod mounting boss.



Package includes our *Snapshot* application software, allowing you to quickly download pictures and view them as thumbnails. Selected pictures can then be easily saved as either Sprite or JPEG files.

Introductory price £499, including carriage and VAT. Includes camera, a set of batteries, serial lead, all necessary software, and manual.

24i16 Multimedia Card

Combined 24 bit digitiser and 16 bit sampler



- Advanced 24 bit video digitiser with stereo 16 bit sound sampler.
- Captures brilliant still images from any S-VHS or composite video source, plus superb Replay movies, and hi-fi audio.
- 1Mb framestore captures still images at full PAL resolution, 768 pixels x 576 lines.
- Replay movies (including sound) can be recorded, image size and frame rate are fully adjustable and are limited only by hard disc and system bandwidth.
- Sound sampler records at sample rates up to 48kHz.
- Hardware video scaling and anti-aliasing, plus real-time control of brightness, contrast & saturation.

Package price £472.94, including carriage and VAT. Includes expansion card, all necessary software, and comprehensive manual.

ColourMobile

Motorised 24 bit colour hand scanner



- 24 bit colour scan head providing 16.7 million colours.
- Resolutions from 100 to 400 dpi (interpolated).
- Connects directly to bidirectional parallel port - no interface to fit.
- Works with printers, dongles, and parallel CD-ROM drives.

"Intuitive and remarkably easy to use... scans are outstandingly sharp with excellent colour accuracy... What more can I say?" - Archimedes World.

"Operation is extremely easy... the results were excellent..." - Acorn Publisher.

"The detail is impressive... this is a good scanner for schools and home DTP users." - Acorn User.

Special price £199, including carriage and VAT. Includes scanner, interface, all necessary software, and manual.

i For the Complete Picture...

Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middlesex, UB8 3PH. Tel/Fax 01895 811401. Email: sales@irlam.co.uk

Please note: All products require RISC OS 3.1 or later, a hard disc, 2Mb RAM minimum (4Mb recommended). Check suitability for your computer before ordering. All hardware products come with a full 1 years guarantee. E & OE.

Access

VISA

Acorn DTP developments

It has been an interesting couple of months on the DTP front with many letters, new releases and DTP of the month submissions. Of particular interest was a letter from Dave Watts, a Lithographic artist from Wiltshire Newspaper and Magazine Printers. Titles as well known as *AutoTrader* are among the many weekly newspaper and magazine publications Wiltshire produce each week, and sat right in the middle of their ethernet system is an Acorn Risc PC talking to all the imagesetting devices, Dave Watts behind the wheel.

Dave, a pioneer of colour scanning before the computer age, is a lithographic artist and Acorn advocate who wrote regarding the 'colour separation, CMYK or Hexachrome' debate in March's graphics page. The article ended with the words 'we may be worse off waiting for a system that is years ahead of its time' referring to the demands of some Acorn users to push through six, seven and even eight colour separation facilities for Acorn DTP programs.

Dave explained how lithographic printing today, which commonly uses four colour Cyan, Magenta, Yellow and Black inks to compose 'full colour' prints, is actually an evolution of traditional stone lithography and litho printing which used anything from eight to sixteen colour separations back in the '60's. Due to the demands of volume, speed and cost, the standard number of colours has been forced down to four. Current computer and film recording technology has no problem with producing accurate, high line-screen separations but litho printers have not matched these advances.

It is a clear example of how micro-electronics have evolved more rapidly that mechanical machinery. The cost and time needed for six colour Hexachrome printing is presently prohibitive for most people. Four colour printing is at the cutting edge for quality per pound, but it should be remembered that if standard, affordable litho printing ever becomes a six, eight or even sixteen colour process it will be less of an advance than a return to its 'stone age' roots.

Font fiasco

Another current area of debate is the font fiasco. Thousands of converted public domain fonts are being flogged off by many Acorn third parties for pennies. Pennies that are not justifiably chargeable as these fonts are essentially public domain. Companies that create their own fonts, like Look Systems and the Electronic Font Foundry (EFF) suffer because of the higher costs they must charge for designing and designing fonts from scratch.

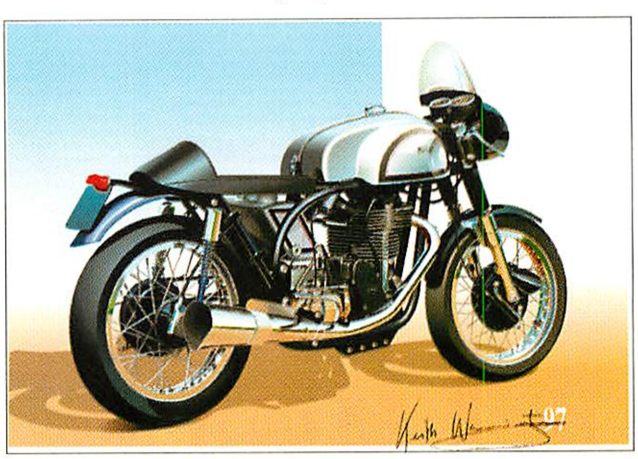
EFF responded to this by releasing a Public Domain Font CD of their own. They have converted and tweaked a massive 4000 public domain fonts only charging the £2.35 they are legally allowed to. This makes EFF's solution easily the best value public domain font library for the Acorn, indeed for any platform legitimate or not. It also puts to shame other companies that have been charging much more for seemingly good value collections.

EFF have also released the Professional Typography CD containing 500 masterfully crafted, hand-tinted fonts all of which are completely original. These will yield superior results on screen and on printing and at just £70 inc VAT including a poster of all the 1200 fonts EFF have designed over the last 13 years, this represents remarkable value for money. I'm sure the conflict will continue and wait with anticipation for the reaction

The pic of the month that took 4 years to draw

The story of this brilliant *ArtWorks* graphic begins way back in the '50's when the Manx Norton motorbike was born. Kevin Warrington, a graphics teacher in Peterborough, began to reproduce the acclaimed design on a 2Mb A5000 in 1993. The graphic became so complex that by the end of the year a 4Mb upgrade was required and now the bike demands 16Mb and saving every few minutes because of its complexity crashing the software, though only upgrades and maintenance work is carried out on this particular machine these days.

Various parts of the bike can be replaced and removed with the set of 'racing' components that have also been designed. Clearly a labour of love, and most deserving of publication in *Acorn User.*



DTP of the month

Thank you for all the schools, businesses and individuals who have sent in their publishing to the graphics page. The response has been excellent proving that there is still a great deal of innovation and technical excellence coming from Acorn users at all levels. Please remember to indicate which package you have used and include your name and address in a text file with your submissions.

Ovation Pro goes CMYK

Beebug is now shipping their long-awaited colour supplement for *Ovation Pro*. The facility allows Postscript output and control for printing on image setting devices at a standard required for professional printing. Accurate Postscript output and CMYK colour conversion is augmented by powerful image processing tools ported from the tried and tested *Image Master* software. The supplement is free for those who purchased Ovation before May 97 but is under £60 inc. VAT for new buyers.

The supplement has been released with a new version with new features like error highlighting and improved, customisable front end. Ovation is now, on spec, the best DTP package available on the Acorn and looks set to improve.

Beebug
Tel: (01727) 840303

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler, at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to augrafix@idg.co.uk.

Showroom open Mon-Sat 10-18.00 hrs (All prices INCLUDE VAT) Carriage not included

CD-ROM Drives

Multi-Session, PhotoCD, CD-DA, White & Green Book compatible. SCSI drives require SCSI card withCDFS>2.20
Carriage: a=£2, b=£6, c=£8

Internal CD-ROM Drives

Panasonic 8xCD **ATAPI** £75c
ATAPI Cable & Fitting Kit £5a
Above drives are compatible with RiscPC/A7000 only.

Sony 2x CD **SCSI** 275ms £80c
Pioneer 12x CD **SCSI** 130ms £200c

External CD-ROM Drives (New)

Panasonic 8xCD **ATAPI** £180c
- suitable for Simtec IDE interface
Sony 2x CD **SCSI** 275ms £135c
Pioneer 12x CD **SCSI** 130ms £280c

StrongARM Card Limited Offer £250 (Carr.£6)

Hard Discs (New)

Carr.: a=£2, b=£6, c=£8

NEW!! Simtec IDE Interface £69
New High performance IDE/ATAPI interface for all RiscOS Computers from A3000 to RiscPC (specify when ordering). Supports up to 4 IDE/ATAPI devices including ATAPI CD-ROM's.

3½" Hard Drives	IDE	SCSI
IBM 540Mb	-	£150b
Quantum 1Gb	£150b	-
Quantum 2.1Gb	£175b	£260b
Quantum 4Gb	£245b	£Call b

Syquest Removable SCSI Drives

105Mb Int Drive	£90b	105Mb Cartridge	£29a
EZ230 Ext Drive	£242c	EZ230Mb Cartr.	£21a
EZ135Mb Cartr.	£20a	270Mb Cartridge	£40a

Hard Disc Interfaces/Accessories

IDE interface	£69b	50-50C SCSI Cble	£12a
Morley Uncached	£113b	25D-50C SCSI Cbl	£12a
Morley Cached	£165b	SCSI2-50C Cable	£18a
Cumana SCSI II	£175b	SCSI2-25D cable	£18a
		50IDC 4-way SCSI	£12a
External case/psu	£90c	50C Terminator	£12a
2nd IDE Drive Kit	£15a	50HPC Terminator	£15a

zip/jaz

- zip & jaz Drives work just like hard drives except they are removeable, giving you instant access to files.
- zip drives use 100Mb capacity discs & jaz drives use 1Gb discs allowing unlimited capacity.
- The drives are fast. Data transfer speeds up to 1Mb/s for zip drives & >5.5Mb/s for jaz drives - ideal to backup your hard drive.
- Each drive comes with 1 year warranty and a starter disc.
- These drives require a SCSI card that is suitable for removeable devices.

Internal zip drive (5¼") £120c
External zip drive £120c
Single 100Mb zip Cartridge £14a
Pack of 6 zip Cartridges £65b
Internal 1Gb jaz drive (3½") £300c
External 1Gb jaz drive £365c
Single 1Gb jaz cartridge £76a

TopicArtCD £15



This CD-ROM contains over 2000 ClipArt files, each in Draw, ArtWorks & CorelDraw3.0 EPS formats. The CD also includes high quality Replay Movies & other demos. Site Licence is included.

RiscOS Computer Systems

1yr warranty. **Carriage included on computers.** All machines are single slice & a backplane is fitted to 10M RiscPC only.

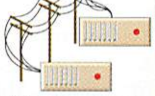
Get 1 of the following free when you purchase a StrongARM RiscPC.
Option 1a - Family Pack (DK Human Body CD, Textease, ArtWorks.
Option 1a - Business Pack (Textease, Eureka3, Datapower).
Option 2 - 17" AKF93 Monitor instead of 14" AKF60 Monitor.
Option 3 - Canon BJC-4100 Colour Bubblejet Printer.
Option 4 - QV10a Casio Digitial Camera with Acorn link and software

Computer Model with	14"(AKF60)	17"(AKF91)	No Monitor
NetStation (28k modem OR 10baseT Ether)	£715	£1090	£450
NEW A7000+ with 48MHz ARM7500FE, 32MHz memory bus, EDO RAM.			
A7000+ 8MHD1.2Gb **NEW!**	£1070	£1475	£830
A7000+ 8MHD1.2Gb+8xCD **NEW!**	£1140	£1540	£900
RiscPC StrongARM 4MHD1.2Gb	£1390	£1765	£1125
RiscPC StrongARM 4MHD1.2Gb+8xCD	£1440	£1815	£1175
RiscPC StrongARM 10MHD1Gb	£1690	£2065	£1425
RiscPC StrongARM 10MHD1Gb+8xCD	£1740	£2115	£1475

Deduct £125 for iiyama MF-8617E or £95 for MT-9017E off 17" prices.
20/20 Finance on Acorn computers - ~20% deposit & 20 interest free monthly payments. Loans from £700(min) - £3000. Subject to status.

QuickLynk (v1.04) £24a

With Local Cable 5m - £36a, 10m - £38a, 20m - £44a



QuickLynk allows you to access another remote RiscOS computer using the serial port via modems or locally using a cable to connect the 2 computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1.9 kbytes/s can be achieved with older computers, eg. A410, A3000, rising to 11.4 kbytes/s on the RiscPC range. The transfer rate is limited by the serial port speed. QuickLynk cannot at present be used directly from programs/command line. Requires RiscOS 3.10 or greater.

QuickTile (v1.03) £25a



QuickTile allows you to create posters from ANY RiscOS application, including Impression. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks and tile references. New features include the facility to print inverted crop marks or no crop marks. QuickTile can only be used with the RiscOS printer Driver or TurboDrivers. **Requires RISCOS 3.10 or later. Return disc to upgrade for £4. Upgrade from Tiler for £18.**

Mail Order - 0161-474 0778 (All prices INCLUDE VAT) The lowest prices without compromise

RiscPC PC Cards

5x86-100 (512kb) £380
above price includes PC Pro
486DX4-100 £230
PC Pro (without PCExchange) £38a
Window '95 CD (Full) £90a
The above can be installed directly from CD without previously installing DOS or Windows.

RiscPC Upgrades

2nd Slice with PSU £116c
2nd Slice without PSU £90c
YES 16 bit Mozart Card £70a

Memory

Following prices strictly whilst stocks last.
RiscPC/A7000 SIMMS
4Mb £25a | 8Mb £33a
16Mb £65a | 32Mb £130b
RiscPC VRAM
1Mb 2nd user £45 | 2Mb £100
1-2Mb u/g (exchange) £80
Call for details of memory for other models.

Monitors (Carriage £10)

Older computers will require an adaptor £12
Ilyama MF-8617E 17" £515
High spec FST Tube with 0.26" dot pitch
Ilyama MT-9017E 17" £549
Very High spec Diamondtron tube, 0.25" stripe

Printers (Carriage £8)

Canon BJC-240 £165
Canon BJC-4100 £190
Canon BJC-4200 £200
Canon BJC-4550 (A3) £360
Canon BJC-5500 (A2) £635
Canon BJC-620 (720dpi) £250
Epson 400 (720dpi, 3ppm) £190
Epson 600 (720dpi, 4ppm) £275
Epson 800 (1440dpi, 7ppm) £390
Epson 1520 (1440dpi, A2) £700
HP LaserJets 6P £550
Add £47 to above printers for TurboDriver

I³ Networking (Carr. £6)

A30X0 EtherLan 102 £140
Archi EtherLan 514 £140
RPC/A7k EtherLan 602 £120
Add £17 to above prices for Access+.

Portable Computers

Carriage: a=£2, b=£6, c=£8
Pocket Book II (1Mb) £305b
Psion 3c
1Mb RAM £320c
2Mb RAM £385c
AutoRoute Express UK/Eire £60a
- one of the best packages for the PB/3a

A-Link	£59a	PC Serial Link	£60a
Parallel Link	£34a	Mains Adaptor	£18a
128k RAM SSD	£48a	512k RAM SSD	£135a
256k Flash SSD	£53a	512k Flash SSD	£89a
PB/Ps3 Games	£Calla	PBII/Ps3a Games	£38a

Hardware Upgrades

17" Monitor Dust Cover £14a
24i16 Card (1Mb) £450b
Dual Serial Card £104b
FPA for 25MHz ARM3 £67a
Joystick I/F (Not RiscPC) £30a
Logitech Mouse (Acorn) £26a
Midi Max Card (CC) £79b
Movie Magic (1 only) £210b
RiscTV Card (Irlam) £285b
RiscTV Teletext option £45a
Scart Cable (9 or 15 pin) £12a
Serial Upgrade (A3000) £27a
2 x 25W Speakers £30b
2 x 80W Speakers £35c
Videodesk (Irlam) £1165b

Hard Cards/Multi-Pods

See top for other hard discs. Carriage £8
A3000/A3010 Hard Cards
340Mb £175b
420Mb £195b

Scanners (Carriage £8)

ScanLight Video 256 £215
Epson Colour Scanners
Include !TWAIN & ImageMaster for RiscOS. Bundles include CorelPaint & OCR software for PC's/PC Cards.
GTx-5000 Para bundle £300
GTx-5000 SCSI bundle £350
GT-5000 SCSI (bare) £300
GTx-8500 Para bundle £560
GT-8500 (bare) £465
GTx-9500 Para bundle £735
GT-9500 (bare) £640

Modems (Carriage £8)

33.6 FLASH Sportster £175
Flash upgradeable to 56kbs
Modems come with a 9-25 PC wired cable. A3000/Archi require an Archi wired cable.
ANT Internet Suite II £115a
ArcFax £32a
Dual Serial Card £104b
9-25 Archi or PC Wired Modem Cable £12ea.a
3-way Serial T-Switch (incl. comm. cable) £32b

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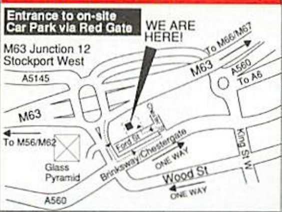
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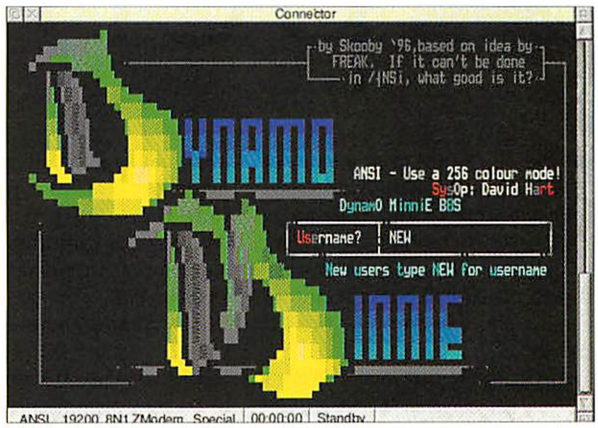
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Dynamo Minnie – the BBS with maxi ideas



David Hart has had Dynamo Minnie BBS on and off line for the last two years but, since December 1996, a dedicated phone line has made 24-hour access possible. Running on two (yes, two) ARM3 equipped Archimedes A310s, the BBS currently sports a Pace Microlin 33k6 modem, ready for full-speed connections when David has saved up for an Intelligent Interfaces dual serial port card.

David says that the ANSI graphics on Dynamo Minnie are one of its highlights, and his use of ANSI Artwork, including other artists' acknowledged work, often cleverly blended into his own equally high standard of ANSI art, can be seen all over the BBS. He's got a firm grasp of the various ANSI display possibilities, and together with the features and programmability of *ArmBBS* software, he's confident that if he comes up with an idea, no matter how bizarre it seems, he can get *ArmBBS* to do it.

While Dynamo Minnie BBS, based in Yorkshire, has all the usual BBS features in his "Every board has 'em" section, including online games, requesting Web pages by e-mail and various browsable lists of users' favourite URLs, Last 20 Callers, BBS and Fido Node lists, David wanted his BBS to be unique.

His users have acknowledged that the BBS is certainly different, and features like the ability to speak words to the Sysop, nice arrow-key-controlled sliding menu bars and fade-in option lists make a pleasant change from the default menus supplied with BBS software. I think there's some logic in keeping 'generic' key options for some functions in spite of David's differing opinion.

The 20 filebases are uniquely subdivided into further file areas so that topics are better classified, and working together with Steve Smale of The 23rd Hour BBS, David was able to organise a deal with the SysOp of a closing PC BBS to mirror between them 70Mb of archived text files, images and transcribed magazine and newspaper reports and interviews for their UFO and Conspiracy filebases.

Have a look at Dynamo Minnie BBS and see for yourself. I think you'll agree it's not much like any other.

Dynamo Minnie BBS
(01977) 620004

56K and why we shouldn't need it

The networking newsgroups and echoes are ringing with talk about 56kbps modem standards, and which Internet providers will be supporting which modem consortium's version of this un-ratified standard for asymmetric high-speed serial data communication. Just when you can afford a 33600bps modem which can now be found for under £100, along comes another target to aim for.

In yet another VHS-Beta situation, the modem makers have split 56K into two incompatible camps. One is called x2, a proprietary standard developed by US Robotics. If you recently bought a 33K6 Sportster modem, you may be able to upgrade to x2 without further expense, but if you're a Demon Internet subscriber, that won't help you as their affinity is with the other standard, K56Flex.

K56Flex is jointly supported by Rockwell and Lucent Technology, with other modem and computer manufacturers. Demon's dial-in lines use Ascend servers incorporating Rockwell chipsets, and in Demon Internet's summer issue of their customer magazine, *Demon Despatches*, their director of network engineering, Peter Galbavy explains that they will upgrade to K56Flex when possible.

Galbavy also says that 56K is really an American phenomenon. On the continent of Europe, ISDN lines giving 64kbps in both directions are about as cheap to install and run as analogue lines. In the UK though, BT and Oftel apparently don't see a need for residential ISDN lines, so rental and installation charges are high. If they could be persuaded to charge more realistic residential ISDN tariffs, we wouldn't need 56K in the UK at all.

Contacting me

You can contact me, David Dade, at the usual *Acorn User* address and please keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181-654 2212.

PC pages

Daniel Shimmin runs the Cybervillage Risc PC x86 Card Information Pages. They contain a comprehensive round-up of information about using PC cards on Acorn computers, improving their performance, and available software and hardware add-ons. PC gamers will find lists of Games that Work and Games that Fail, as well as compatibility lists of other software. The pages also include editorial reviews and some good photos of PC cards in situ.

The Risc PC x86 Card Information Pages
http://www.cybervillage.co.uk/acorn/pccard

Bulletin Boards – a shut and open case

Summer has never been a good time for BBSs, and what with the Rayners' BrainStorm BBS closing in May and the June announcement from Simon Elzinga of the closure of his Archimedes BBS in Holland, you might think this is the beginning of the end. But enthusiastic BBS Sysops are still out there itching for callers. Look out for QS-BBS, run on *NewsFlash* software by Keith Mckillop and John Reeves, opening soon in Wokingham, Berkshire. I'll publish the number and details when they are ready.

Compact But Bijou

Mark Turner gives this name to his Acorn Web and demo site hosted by America Online. Stylishly simple, it is dedicated to two areas of Acorn computing – Web page authoring and Acorn demos that show off our machines. Downloadable resources include general utilities to assist with Web authoring and a selection of graphical resources such as textures, backgrounds, animated gifs and icons. You can read Mark's *What Demo?* guide to the best demos for the mature machine and download them.

Compact But Bijou – Acorn Web and demo site
http://members.aol.com/MTurner249/Compact/index.htm

Datafile news

The excellent Datafile Web pages have now been updated to allow the download of individual parts of the PD library catalogue, which will soon have completed flags for all programs to indicate which run on the StrongARM without problems.

A cut-down PD demo version of the latest (commercial) game from GEK Productions, entitled *Emotions* is now available on the Datafile Web site. Expect a full review in the Game Show soon.

Following the release of Emotions, the Datafile is looking to expand further into the commercial world, and is interested in increasing its range of non-PD software. If you're interested in distributing your software through the Datafile, you can contact proprieters, Dave and Sue at : The Datafile, Willoughby House, 89 Woodville Road, Boston, PE21 8BB, or by e-mail at : dave@datafile.demon.co.uk

The Datafile has been one of the cornerstones of the Acorn PD scene for as long as I can remember (and looks set to continue this way) and the PD page wishes Dave and Sue lots of luck with this new venture.

StrongED

Version 4.2 of *StrongED* is now available from author Guttorm Vik's Web site at http://login.eunet.no/~guttorvi/strong.html

As Guttorm says 'StrongED is the 'friendly text editor', equally suited for the professional programmer and his mother. Happiness is only a couple of mouse clicks (and 250K) away'.

Xperience

The Xperience team are one of the best known demo crews on the scene, with a wide range of productions including *Xcentric, Blu* and *Phonology* under their belt. Steve Mumford talked to the crew for the PD page:

AU: *What is a demo? What's the difference between a good one and a bad one?*

TXP: A demo is any piece of computer software that presents a nice mixture of graphical and musical artwork. We simply call it *digital art*! A good demo features good design and some kind of storyboard — a concept that can be recognised throughout the demo. A bad demo is simply a collection of graphical routines, accompanied by some music. Typical demos are somewhere between these two extremes.

AU: *Why do you spend enormous efforts in creating more or less futile demos? Why don't you try to earn money, for example by writing cool games?*

TXP: We really don't focus on the programming aspect of demo coding. It's the creative element which attracts us. If we didn't create demos, we'd choose some other kind of modern art, like music video design — but we'd never turn into pure programmers.

AU: *How did you meet up, and what drove you to form The Xperience?*

TXP: Most of us have been working with Acorn computers since about 1991. At that time, we were quite enthusiastic about Acorn machines — they were fast, easy to use, elegant to program... But first of all, they were ready-to-use — you didn't have to purchase soundcards or that kind of thing. You know, some of us had been belonging to the Amiga/C64 demo scene for a long time, and in the early nineties, we were looking for a new challenge. So we moved to Acorn. We realised very quickly that there wasn't any true demo. To change this, Xperience was founded in October 1993.

AU: *What are your aims as a group?*

TXP: Today, it's impossible to create a demo without team support. You can easily publish effect compilations as a single coder, but if you want to add a bit of style, you'll fail. Demos aren't just technical show-offs — demos are digital art.

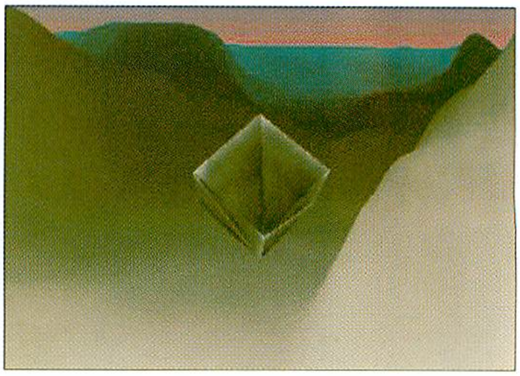
Our aim is to publish beautiful products which are interesting for multimedia artists, computer programmers and common users, of course. Xcentric and Blu don't really fulfil these requirements, but our future demos will. Well, at least that's what we think...

AU: *What do you do when you're not working on new demos?*

TXP: Well, you'd better ask what we're doing when we're not studying! All TXP members are students, and the longer we study, the slower our demos progress... Most of us are quite normal people — our hobbies are, for example, Sci-Fi, movies, sports, books, — nothing special, actually.

AU: *How did you learn to program?*

TXP: Learning to code demos is a long and strenuous process. It takes years to code state-of-the-art routines. The only way we know of is to practice. Start off with some BASIC or C routines, then try to convert them into assembler. After that, just spend days and weeks trying to get your routines faster, shorter and better. You'll need a lot of patience, enthusiasm and time!



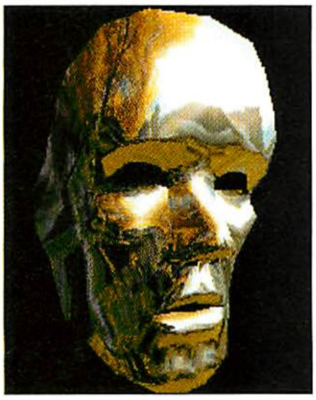
AU: *Why do your demos require a Risc PC?*

TXP: We feel obligated to let the Acorn demo scene close up to the rest of the computer world. A demo for the A5000 simply doesn't compare to a demo written for a 100 MHz Pentium with PCI bus and 256K 2nd level cache! By writing demos for the Risc PC, we can assume quite a lot of things: RISC OS 3.5, freely definable palettes, 32K or even 16M colours, a somewhat fast (and cached) processor, a hard disc, and a certain amount of RAM. This makes life easier for us and allows us to concentrate on the real thing.

AU: *How long does it take you to develop a demo?*

TXP: It took about one year to develop Xcentric. Blu was coded in only two months, because we had developed our Demo Operating System (DEOS) in the meantime to speed up demo projects. But even DEOS isn't helpful in eliminating or by-passing RISC OS bugs. So it took more than a year to release Phonology, although it was more or less finished after six weeks of work.

interview



AU: *What tools are essential for creating a demo?*

TXP: We've developed a wide range of powerful applications. There's a heavily optimised ARM assembly library, a utility to find the most suitable palette for a TrueColour picture, an 8-bit palette editor, a soundtracker called "Pepper Tracker", and some other tools for rather specialised tasks. But of course, we're using third-party applications like *Desktop Director, ExtBasAsm, extASM, Revelation 24, StrongED* or *Zap* as well.

AU: *Do you have a favourite way of crashing your system? What's the most devastating crash you've witnessed?*

TXP: A very sophisticated way of crashing RISC OS is to use the ALT+Break watchdog without having released a claimed IRQ before! Works really good...

While programming on the Pepper Tracker and testing some new weird effects, suddenly the computer of Lunatic crashed, and didn't recover after a hard-reset! In fact, it didn't revive at all, since his ARM610-card had died. Could be just coincidence, but then — who knows?

AU: *What's been your most embarassing programming error?*

TXP: Blu didn't run on machines fitted with RISC OS 3.6 at first; we had to release a bug fix... It was just one faulty ARM instruction which caused the error. Sorry!

AU: *Will there ever be an Xperience game?*

TXP: Well, if Acorn did subsidise such a project — why not? But at the moment, an Xperience game is quite unlikely. We don't want to earn money — we just want to let our creativity take its course.

AU: *How do you judge Acorn's future?*

TXP: Hard to say. RISC OS is still the only operating system one can work with, but the Acorn hardware seems to be a bit outdated nowadays. Let's see what the new motherboard will bring ... anyway, it's extremely astonishing that a small company like Acorn has been introducing innovations since about 1980! Let's hope they'll continue for another two decades.

Since this interview The Xperience have won first place in the Siliconvention demo competition, beating entries like Icebird's Reisnac and Frank Foehl's Iron Dignity demo.



Sharp news

David Sharp runs one of the best Acorn-orientated home pages, packed full of regularly updated information about his software. *Typeinfo* his flagship utility is under continual development and can be registered for only £5, giving access to the updated version 1.64.

David is currently in the process of joining *Arm'd and Dangerous* with the view to producing his game *Tellomere* with the help of an experienced team. David describes the game as "a kind of strategy game set in a fantasy world, with small characters walking about attacking each other, capturing monsters and gaining weapons and spells in order to defeat the enemy.

"No, it isn't another RPG or anything of the sort, the emphasis of the game is strategy, in the way you attack and defend with your stronger and weaker characters. The player gains more characters as the game progresses, and can then take these characters into battle with them. Wizards, warriors, healers, mages will all come into play. It should be pretty good!" Certainly sounds worth the wait. Its about time we saw some more strategy games on the Acorn. David's home page can be found at http://www.geocities.com/SiliconValley/Park/4119.



Full details of the Siliconvention demo party can be found on the official party Web site at http://www.siliconvention.com/index.htm. First and second place entries from TXP and Icebird have yet to be released, but should be out soon.

Visions

Visions of the Impossible, the authors of popular PD games like *Super Foul Egg* have nearly completed another new game called *Sunburst*. Votl member Anarchy describes the game as 'a 360 degree rotation shoot 'em up with missions, missiles, wizzy things, wazzy things, stars, different ships to fly and all for shareware'. Expect a full review when it hits the streets.

Recommended PD Libraries

- The Datafile, Willoughby House, 89 Woodville Road, Boston PE21 8BB
- Naked PD, 'Fayence', Fulford Rd, Stoke-on-Trent, Staffs ST11 9QT
- Arch Angel PD, PO Box 41, Exeter EX4 3EN APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ
- Beebware PD, 83 Forrest Road, Huncote, Leicester LE9 3BH
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Risc World PD, daniel.hayes@argonet.co.uk

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at the usual Acorn address.

Or preferably, by e-mail to aupdpage@idg.co.uk

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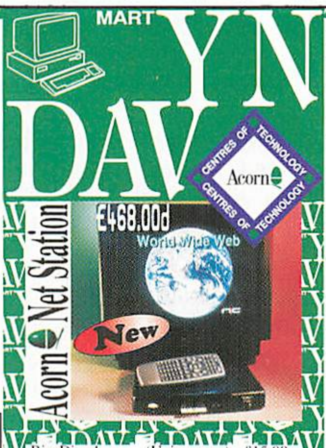
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E.&O.E 19th Jun 1997

pc

What's on the cards?

Since I started writing this column the PC card and its associated software has come quite a way – we began with SX 33s running the original !PC software. We now have access to 5x86 chips running PC Pro augmented by various patches that extend the use of the card considerably. But there are still some problems. Some will perhaps never go away and some are being looked into. Although I've covered many of these questions before in bits and pieces, I thought it might be worth putting them all together.

Working well

Assuming you are running a card plus standard software it will perform certain tasks reliably and decently quickly. Most Windows software (95 and 3.1) works well and reliably provided it is designed to work within Microsoft's guidelines. There are some exceptions which are detailed below but you can be pretty sure that standard packages will work fine. ASPI support for such things as external scanners, CD writers and demountable drives is also available either via Aleph's Web site or, I understand, from Alsystems.

This may not always be a trivial matter to implement, but it can be done. Also don't forget *PC Exchange* which does assist markedly with cross platform exchange of data – I use it regularly. You could also try *WinRisc* which integrates the platforms even further, but for an unknown reason it won't work on my system so I can say little about it in practical terms. (See full review in this issue).

Problems

QuickTime movies: a system developed for the Apple but ported to the PC. On the Acorn version of the PC it's supported but it isn't bug free – there is a problem with keeping the rate of replay consistent which in turn makes some titles unreliable or unusable. Take for example, the CD *Battles of the World – Compton's Home Library*. Most of the CD runs well as it comprises animated graphics with conventional audio files, but the linking narrator is a character stored as a QT movie, and he often sounds like a chipmunk through a fuzz box.

Sound output: QuickTime aside, Windows usually gets its sound output right and the old problem with Win95 of the driver disappearing every time you installed new software is now cured thanks to the new driver scripts available from Aleph's Web site.

MIDI Output could also be provided using Windows MIDI drivers plus a RISC OS MIDI system such as the Audio Dynamics XG50 card or ESP's *MidiSynth*. The latter is great value but can slow down the PC card as it absorbs processor power. DOS sounds are a different matter. Neither *!PC* nor *PCPro* support these well, not because it wasn't tried but because there were too many variations in DOS software for everything to be covered.

That has largely been fixed (thanks to the efforts of R-Comp) with *PCSoundPro*, an add on for PCPro that provides the missing links. It covers a growing number of titles, mostly games, and is virtually essential if you want to run DOS software with sounds. Many titles crash without sound being supported, so this software makes many games available to Acorn PC card users. However not all is perfect. Under some circumstances MIDI sounds are not always shut down so you land up with what sounds like the famous lost chord playing interminably. If audio stuff is of interest, watch out for a new PCPro release and for news from R-Comp.

Sound input: That's taken care of sound output – but what about input? PCPro cannot accept sounds sampled via Acorn hardware. You could for some purposes sample sounds in Acorn mode, save them as .WAV files and load them from there into a PC package. But Xemplar have a solution for users of the Oak parallel port sampler. £10 plus VAT secures a software module designed to provide an emulated *Soundblaster* input.

This system can't have pretensions to high quality sound input (and anyway it makes much more sense for users to support native Acorn software like Oregan's *Prosound/Studio Sound* for quality audio work), but Xemplar's solution may have a place particularly in education, for example, supporting titles such as the *Learn to speak* series from The Learning Company.

Games: This is where the PC card and its software still runs into serious problems. These problems usually fall into two categories – power (or lack of it) and compatibility. The power problem is a long-term headache. I use a 5x86 in a StrongARM machine. For some titles it's still slow. For others it's fine and DOS based games appear to benefit more from the SA than Windows titles.

The problem is that the PC platform is progressing rapidly and games makers are getting vastly more ambitious. Don't get me wrong – this is a problem for PC owners too. But whereas you can buy an MMX powered PC if that's what you want to waste your money on, you can't get an MMX on an Acorn PC card. What you can do is maximise what you have, either by buying a new card, getting your existing card upgraded, or if you are brave, contact IFEL and ask them for a copy of the instructions on how to do it yourself! Apparently it has been done but if you take this route, it's your own responsibility.

Other compatibility problems

The other two problems are VESA support and Direct X. Thankfully good VESA support has now been provided in PCPro. Sadly, DirectX has not. Direct X is a kind of fudge built into Windows 95 that avoids the ponderous Win95 drivers and provides a more direct route to screen output – not via a conventional Win95 window.

The advantage for game writers is that it is considerably faster. So as game developers gradually move from DOS to Win95 (which does now seem to be happening), an increasing number of new titles fail to run on our PC cards at all. Aleph One have said they are looking into DirectX support. But whether it will ever appear or not I can't say. Nor is it possible to say whether it will be fast enough when/if it does.

The future?

Everyone else seems to be crystal ball gazing, so here goes? As Acorn is committed to multi-processor platforms it seems likely that the PC card support will continue for the new machines under development. The cards currently available already provide excellent support for the more routine activities associated with using a computer for business for example, and some existing minor problems are being sorted out. The so-called millennium bug has now been dealt with plus some fixes for faults you may never have noticed and a tidied up PCPro is due soon.

The rapid development of third-party support for cards seems a healthy sign that there is money to be made from upgrades and faster cards. But the existing hardware already pushes the RPC to its limits – so where next? If, as is probable, the next generation RPC has considerably improved memory and bus speeds, existing cards will not only perform better, new faster cards would be able to take advantage of the improved hardware.

Will they be produced? I don't know for sure but I hope so and the chicken entrails are promising. In the meantime it's possible the *ArmSwitcher* will soon support a graphics accelerator which could be good news for speed freaks.

Contact

You can contact me, Mike Buckingham, by post at: *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP or by dropping me an e-mail at: aupcpage@idg.co.uk

music & audio

RealAudio coming soon ....

If you flick through any one of the many Internet magazines currently available, and read about plug-ins for Web browsers such as *MS Explorer* or *Netscape*, you'll soon find mention of *RealAudio*.

What started as a rather ambitious attempt to squeeze realtime audio down a phone line alongside pages of text and graphics, has now evolved into one of the most exciting areas of the Web.

For those of you unfamiliar with the technology, RealAudio is a super compression technique designed to provide a real-time streaming audio protocol over the Internet. In simple terms, this means being able to listen to a sound recording via the Internet, without having to download the whole sample into your computer first.

Whereas in the past you would have had to wait typically 10 to 15 minutes to download a three-minute audio segment, using RealAudio, you can now listen to it almost immediately.

It works by splitting the whole sample into a series of smaller parts (referred to in network terms as packets) and then sending these in quick succession to achieve smooth playback. Splitting the sample up in this way also means that it's possible to achieve random access to any part of the sound, ie. start playback from wherever you want.

By using fast hardware at the server end (the place from where the sound is being played back) it's even possible to encode a live performance in RealAudio and transmit this over the Internet.

Maybe you've seen or heard of bands such as Orbital announcing concerts 'live on the Internet'. Well, in most cases, this is the technique they use to achieve it.

Quality depends on the speed of your Internet connection and with a modem capable of a baud rate of 28.8K it's possible to achieve a continuous stream of near CD-quality, stereo sound. Even with only a humble 14.4K connection, you can receive a perfectly clear mono 'signal' or similar quality to that of an AM radio.

Now, I'm sure you're wondering what this has got to do with Acorns? Well, Acorn's new Web browser which was demonstrated at the recent Wakefield Show, plus a soon-to-be-released version of ANT's *Fresco* both just happen to support plug-ins, and rumours are currently going around that one of these plug-ins is very likely to be support for the RealAudio standard.

Another point worth noting is the floating point hardware in the new A7000+. RealAudio is processor time-hungry and the inclusion of a hardware FPA (floating point accelerator) would greatly benefit such an application. As they say, watch or, more precisely, listen to this space ...

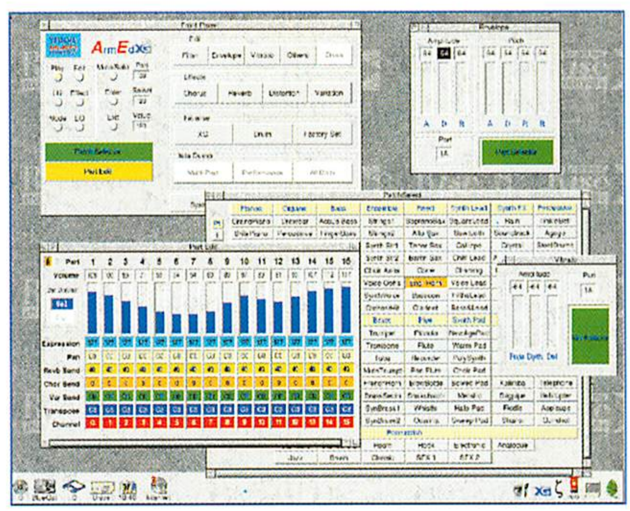
Fly by wire

Even though it's often useful to have electronics stuffed into nice small boxes, which is often the case with midi expansion modules and the like, the drawback is often the shrinking of any control screen or, in some cases, the complete lack of one.

Yamaha's excellent XG range of MIDI hardware (which includes the daughter board found on the Audio Dynamics DMI50 expansion card) utilises a number of MIDI System Exclusive (or Sysex) commands to control various parameters such as pitch and DSP. Unless you're a bit of an expert however, getting the full use of all the functions can be quite a task. This is where new Acorn company The Score Machine's *ArmEdXG* comes into play.

ArmEdXG is a RISC OS control application for Yamaha XG devices, fulfilling the same function as *XGEdit* on PC and Macintosh platforms, that enables Acorn computer owners to control XG devices. The program is still in development, although the first release is expected to contain the following features:

- Easy editing of all parameters via windows on screen
- MU80/50 control panel buttons which can be operated directly from the computer if required
- Editing of most used parameters from main window
- Saving and restoration of XG configurations means setting up for a new number in seconds
- Owners of Roland GS MIDI devices will also be able to control their hardware via the main window of ArmEdXG.



The product is expected to retail at £20 and a beta/demo version is available now from The Score Machine's Web site at http://www.scoremac.demon.co.uk

More popular than The Beatles ....

Not so much news but still a bit of sound info worth noting is the continuing rise of *Sibelius 7*.

There have been not one but two separate demonstrations, one by the authors Ben and Jonathan Finn on *The Money Programme* on BBC 2 (May 18th) and one by Sibelius expert Michael Price on Debbie Thrower's afternoon program on Radio 2 (May 23rd).

The BBC are currently running a computer literacy project entitled *Computers Don't Bite* and demonstrations of Sibelius 7 are part of it. Who knows where the world-renowned program is going to turn up next?

How about a StrongARM Risc PC running Sibelius 7 and presenting *Top of the Pops*? It would certainly be a little more articulate than the current spate of guests. And, as if appearing on both radio and TV wasn't enough, Sibelius 7 is also making a number of live appearances at the following venues – Cambridge (2nd August), Royal Academy of Music (31st August, 28th September) and Birmingham (13th September).

Sibelius can be contacted on (01223) 302765 or on the WWW at http://www.acorn.co.uk/developers/sibelius/

Contact:
You can contact me, Rob Miller, by post at: the *Acorn User* address or by e-mail me at: aumusic@idg.co.uk



Iron Lord

James Byrne, upgrade by Gordon Key



You are a knight who has been dispossessed by your Uncle Robert, you must raise an army and defeat him in battle in order to regain your lands. Unfortunately you start with almost nothing.

To gain the support of different political



factions you must travel the land engaging in various activities, solving problems, drinking ale, beating up errant knights, winning games of chance and generally having a late-medieval time of it.



You begin at the ruined castle of your family, climb to the top of the tower for the game load/save options and the options to use when you're ready to fight your naughty uncle. Pressing Escape at any time



aborts the program and returns you to the desktop without warning.

Main map

The main map is used to move between locations in the your ancestral lands. Press F1 for sound options, you can turn the music or the speaker on and off and adjust the overall volume. Point to a location and



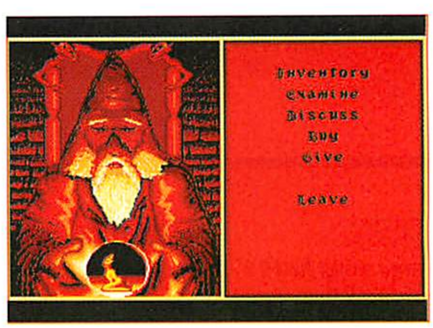
click to go there, you can only move from one location to an adjacent one.

There are two types of location, in built-up areas you use the small map on the right of the screen to move around. You will find



you can enter some of the buildings and talk to the inhabitants. The other type of location contains only a single person so you can speak to them immediately.

When you arrive at a location you will be standing near your horse, pressing Return



immediately to re-mount and return you to the main map.

To explore a location use the following keys:

Z	Left
X	Right
?	Down
@	Up
Return	Enter a building or mount horse.

To converse or deal with an occupant of a building select the appropriate menu option with the mouse. To talk to the occupant, click on Discuss and your first question will appear, click on the question to get the answer or click on the right arrow icon in the top right of the screen to ask another question. There is a left arrow icon to enable you to repeat questions. You can also give / buy articles and perform an inventory.

Some of the buildings or areas contain games as opposed to simple occupants. All games have a Stop! icon, use this when you want to interrupt or stop a game.

Games

Archery Use the mouse to sight, select elevation and fire the bow. This is a relatively easy game but you must go through many rounds to win.

Arm wrestling Start the game by clicking on a hand icon then either repeatedly press z,x,z,x,z,x...... or thrash the mouse from side to side. This is a bit tricky.

Dice This is a game of chance, use the mouse to select your options.

Sword fighting Lash your sword (the mouse) around in the direction of the arrows that appear on the screen then click to strike — this one is hard.



Wage war Control the position and movement of your armies via the mouse. You must fight the war and feed your armies on the loaves that appear randomly.

Maze/Labyrinth Use keyboard control as main map but Return picks up objects or uses them. Baddies appear later on.

As you travel around the land you may be challenged by knights, you must fight them to maintain your honour.

To ensure it fits on one disc, *Iron Lord* has had a few small files compressed with *ArcFS*. You must load ArcFS before playing the game otherwise it will not run.

EasyPage demo

Porters Primary Software

This demo version of *EasyPage* has saving and printing disabled. It can still load EasyPage files (one can be found in the WorkDir), and import text into the Story window, and import Sprites and Drawfiles into the Picture window.

EasyPage is a very simple desktop publisher for children from the age of five upwards. With EasyPage children can draw a picture, write a story and put them together on a page along with a title and their name, and then print it out.

The EasyPage picture window has lots of tools for drawing with including a pencil, a brush (with three brush sizes and a spray), fill, outline and filled shapes, lines and a text tool for writing onto the picture at any size.

EasyPage can import files from *!Draw*, which can then be coloured using the fill tool, and Sprite files from other programs. Pictures created in EasyPage can be saved and printed separately.

The EasyPage story window allows children to write a short story to go on their page. The story is displayed in a large font, either the easy-to-read font supplied with EasyPage or another of your choice.

EasyPage can read the story and page using built-in speech synthesis software — not available in this demo, see box.

A word book is also built in to EasyPage with a choice of either alphabetical or topic pages. A word can be highlighted in the word book and spoken by the computer. Words can be automatically typed into the story window from the word book.

The EasyPage page window places the picture and story on a page and allows children to add a title and their name to the page. A border can be put round the picture and there is a choice of page layouts. The completed page can then be saved, printed, and read by the computer.

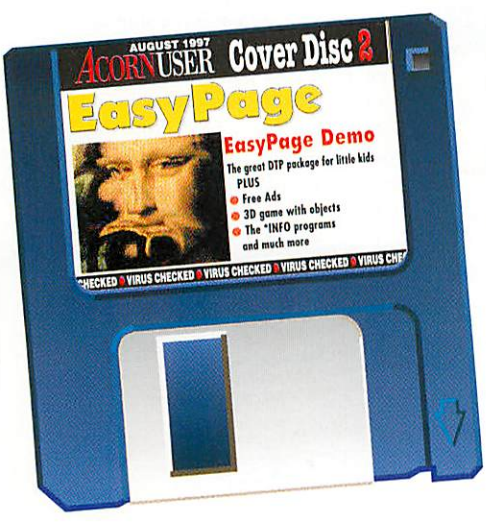
EasyPage allows you to create work directories in which files can be easily saved to and loaded from, but you can still load and save files by dragging their icon in the normal RISC OS manner if you wish.

EasyPage has a simple setup window allowing you to set the work directory and create new work directories, change the font used for the story and the title, and alter settings for the word book and speech. Once set, the choices can be saved so they are automatically loaded when EasyPage is run.

Contact Details

Address: Porters Primary Software 138a Harvey Clough Road Sheffield S8 8PG
Telephone: 0114 258 2878
Pricing details are in the help file on the disc.

To ensure the program fitted on the cover disc we were forced to remove the John Duddington's *Speak* module. A full demo, and the full program, are available from Porters Primary Software.

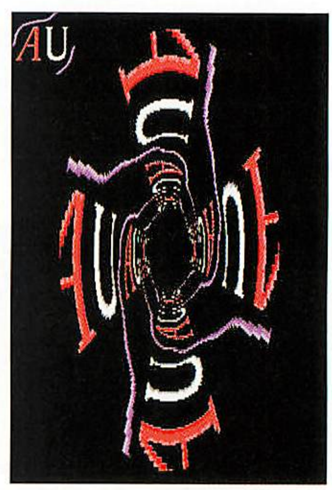


Regular items

- •The hands-on WIMP code from the last two issues
- •Free Ads — all our Free Ads on disc
- •Bucketloads of *INFO from graphics to games

Extras

- •Adding objects to the 3D game
- •Mike Cook's General MIDI hardware synthsiser switcher — as seen at the Wakefield Show



Rob Jeffs runner-up in the *INFO Tunnel Challenge

Disc information

The software on these discs has been compressed using ArcFS 2 from VTi, and are opened by running a copy of ArcFS then double-clicking on the archive to open it. There is a copy of ArcFS on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH. If it verifies successfully return it to the Acorn User editorial office at the usual address.

The Acorn User cover discs have been checked for viruses using Killer version 2.700 from Pineapple Software.


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Super Model

Jack Kreindler sees if the new version of TopModel has been worth the wait

A few years ago in Harrogate, when only a select bunch of developers had their own Risc PCs, a group of Italians called Sincronia Soluzioni Multimediali were demonstrating a very impressive 3D graphics program, with ingenious modelling tools, a dedicated single 3D viewing window and real-time solids rendering.

Since then, *TopModel* has become a subject of much interest in the Acorn world – generating criticism, speculation and praise. In April this year, TopModel 2 arrived, the first major overhaul of a product which was promised to be the last word in 3D modelling on the Acorn, before TopModel Pro. It's been a long wait for version 2, originally scheduled to touch down mid-1996, and just as 3D graphics on affordable home computers has improved in the last 12 months, so have people's expectations. Has it been worth the wait?

Packaging and manual

On the surface, the packaging is largely unchanged. The cardboard with colour printed sleeve remains and inside the box there is nothing to write home about. If you judge books by their covers TopModel's is certainly not in the same class as *ArtWorks*, *Compo* or *Ovation Pro*.

The software comes on just three discs which are not difficult to install now that the program has had a Gordianectomy and been augmented with Spacetech's friendly installation window. Gordian was one of the main reasons why early versions of TopModel first caused criticism. Many users had enormous installation/uninstallation/reinstallation trouble with the infamous Gordian protection system. And it wasn't just novices. It took me several attempts (read days) to delete and then reload my copy from one disc to another. In addition StrongARM incompatibilities forced Sincronia to abandon protection.

Not nearly as easy as breaking through the Gordian protection system was understanding the user manual for version 1. This is one of the areas which Sincronia promised to rectify for version 2. Indeed the manual is much improved aesthetically thanks to the screenshots taken from the radically improved user interface of the software.

The 'English' still leaves much to be desired. Including syntax, grammar and spelling mistakes – there are no less than seven errors in the first eight lines of the introduction. This is quite acceptable to the computer-cum-language enthusiast but



material?

can only appear unprofessional to everyone else.

Perhaps this is being too harsh, but a small task such as getting the manual proof read can make a real difference to the overall quality of a package.

The manual has seven major chapters – the introduction, 'first steps' for novices, a tutorial guide to get you excited, a 'basics' section going through all the main tools and dialogues, the menu section looking at every class of tool available, the view pane section looking at how to look at your scene and, finally, menus and options in TopModel 2.

I quickly climbed the learning curve by exploring the manual, trying out the step-by-step tutorials and dissecting the large number of sample files provided on disc.

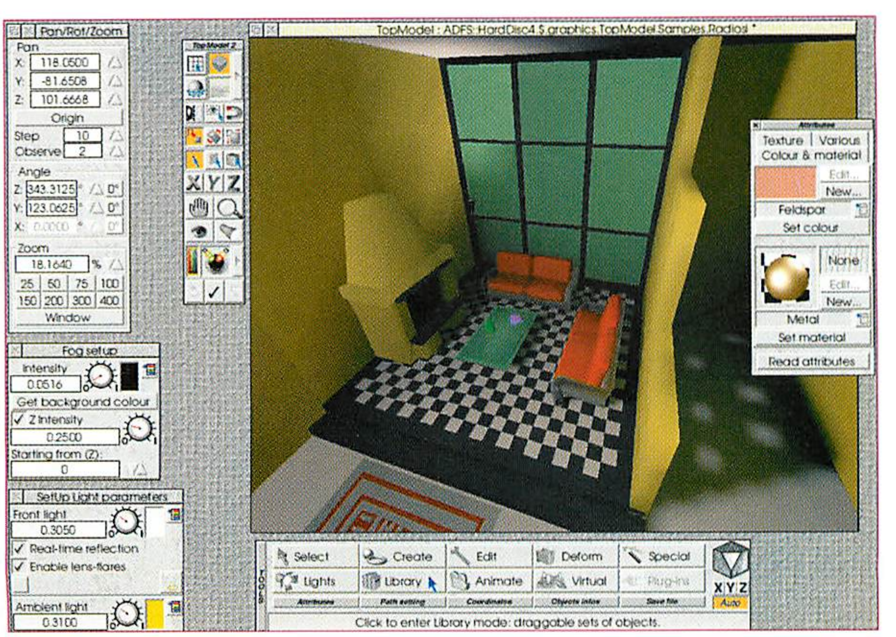
Using TopModel 2

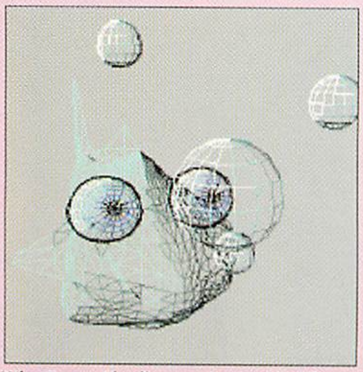
So onto the software. There are three extra applications other than the main 980K modelling package; two little programs dedicated to file importing and exporting and a TopModel and VRML browser. The browser plays its role well, being fast, loading almost instantly and occupying only 192K of memory. Both TopModel and VRML files can be viewed in anything from wire frame to gouraud-shaded modes with options for viewing-fog, transparency and textures (though none of my models were previewed with their textures).

The import and export facilities are relatively harder to use and despite following the rules by the book, I was unable to import reliably many of the demonstration foreign files formats. Either they would not load and would sometimes crash the main application or browser. Exporting was more successful, with the application able to convert TopModel ASCII descriptions into valid VRML, DXF, POVRay or GEO files.

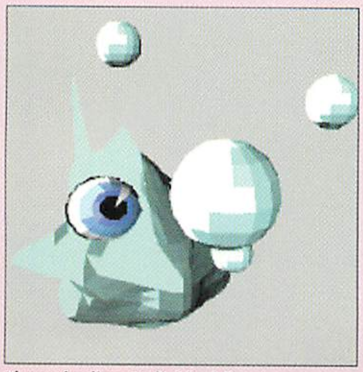
TopModel 2 loads quite briskly into dynamic memory, if your hardware supports it. A single click on the icon brings up the view window with toolbars at either side. At this moment you notice the most dramatic changes Sincronia have made. The interface, though still unconventional, has been completely revolutionised – a massive improvement

One of the greatest flaws of TopModel 1 was the interface, which attempted to cram unstructured swarms of tiny icons into tinier windows. Like Digital Arts, who were responsible for writing *DA's Picture*, Sincronia lost many votes because of an interface that they thought was more intu-





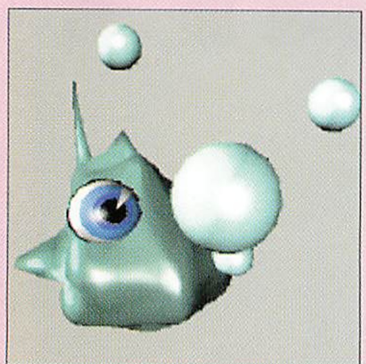
Wire Frame Shading can be enabled for all editing movements whatever the final rendering quality selected. It is very fast and smooth



Plane shading. Individual facets are shaded at a low accuracy. This is a good mode when you need to edit or move filled and depth-sorted models



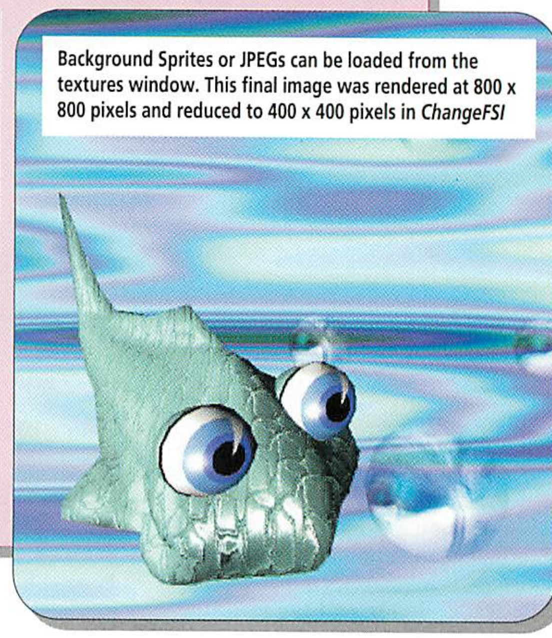
Gouraud shading. In this mode there can be ambient lighting – still no diffusion or reflection as in DaVinci. It is slower than plane shading but gives truer 3D rendering



Phong shading automatically activates material characteristics like ambience, diffusion, refraction, reflection and gloss. This quality gives a superb result for a very small speed penalty compared to Gouraud



Phong shading with transparency (bubbles), texture mapping (fish scales and bubbles) and bump mapping (fish scales)



Background Sprites or JPEGs can be loaded from the textures window. This final image was rendered at 800 x 800 pixels and reduced to 400 x 400 pixels in *ChangeFSI*

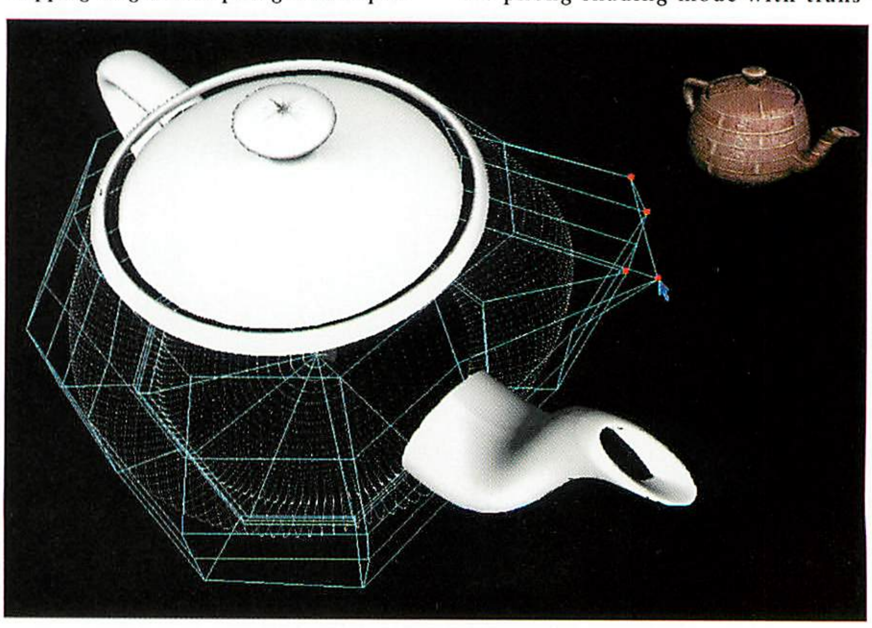
itive and economical with space than an Acorn-compliant one.

This new interface does not strictly conform to Acorn guidelines – in fact the width and colour of many of the title bars look more like *Lightwave 3D* than anything on the Acorn. However, the combination of anti-aliased text on dark buttons, each possessing its own beautifully rendered 3D icon, works wonderfully. Every function on the toolbar has an icon and text name and the optional help line gives explanations of all important actions.

The other main toolbar is the View Pane. This is essentially the controls rendering and also the selection modes. Options specific to the Gemini graphics engine which has powered the program since version 1.13 are found here. Features of Gemini include real-time fog effects, fast phong shading with texture mapping, bump mapping, transparency and the ability to view scenes processed with the forthcoming radiosity renderer. Only one pre-processed radiosity file is supplied as a demonstration which allowed the scene to be navigated with specular (soft) shadows and diffuse light sources. It's brilliant.

Gemini is not quite the fastest 3D graphics engine on the Acorn platform, Aspex's *DaVinci* 3D program feels considerably faster on the re-draw. It is true that some of the seemingly fast graphics engines around like those from TAG and Aspex only use gouraud shading with 'chrome mapping' to give near phong shaded quality. But on a StrongARM Risc PC in a 1152 x 848 screen mode with 32000 colours, DaVinci models look better and move more smoothly than TopModel's in gouraud shading mode.

Where TopModel stands on its own is in the phong shading mode with trans-



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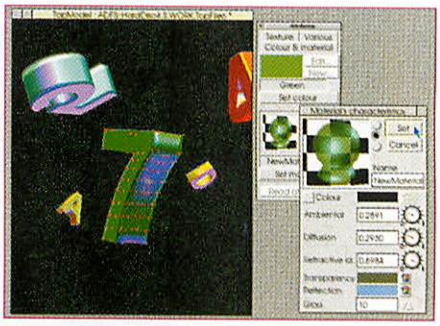
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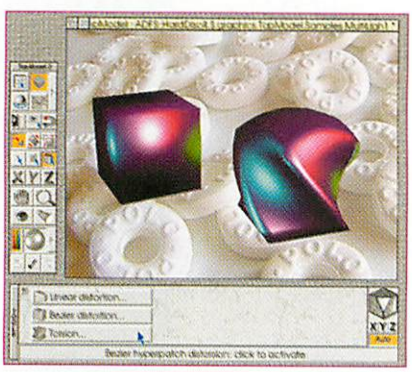
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Super Model



parency and texture mapping activated. Though markedly slower than at the highest level of rendering in DaVinci, TopModel generates a superior quality of image still at several frames per second for even the most complex scenes on a StrongARM (many of the screen shots in this article have been grabbed directly from the screen and downsized).



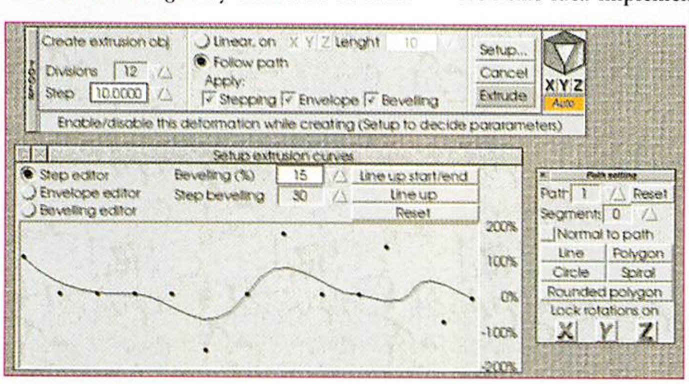
Model making

Creating solids remains one the most powerful aspects of TopModel 1. TopModel 2 does not have a greatly increased number of primitives but the way the creation tools are presented now makes modelling a pleasure rather than a pain. Cubes, spheres, tubes, cones, toruses, planes, paths and polygons are the primitives on offer. Draw files can be dropped in, filled and extruded just as with previous versions.

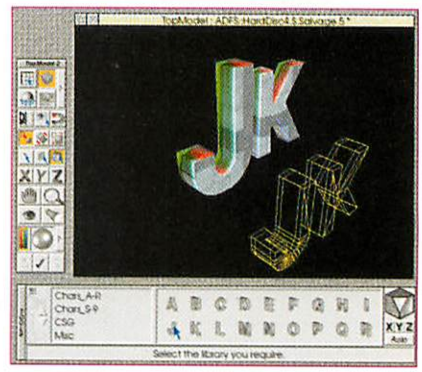
Many of these solids can be generated as bezier nets which allows you easily to mould basic shapes into natural or real-world objects. Selection of points and lines in a 3D world can be awkward to say the least, especially when there are many objects in the fore and background of the bits you want to grab.

There are different buttons for selecting single points, planes and whole objects and visible points only. Selections can then be edited, moved, rotated and so on relative to the viewpoint, the axis of the scene or the selection itself. The arrow keys enable accurate editing along single axes and adding Shift to the key presses accelerates processes. The basic editing feels much the same as before but substantially faster than pre-Gemini versions of the package.

A real step forward is the ability to step backwards. Multi-level, user-defined undo scenes are recorded on disc. I have not seen this idea implemented on any Acorn 3D program before but it appears a logical inclusion considering the ubiquity of undo tools in bitmap and vector graphics programs.



The overhauled front-end helps when using the sometimes complicated advanced effects tools.

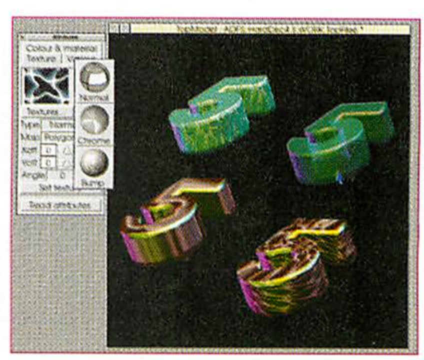


Some of the functions like the materials editor have a real-time visual preview of the effect before it is applied.

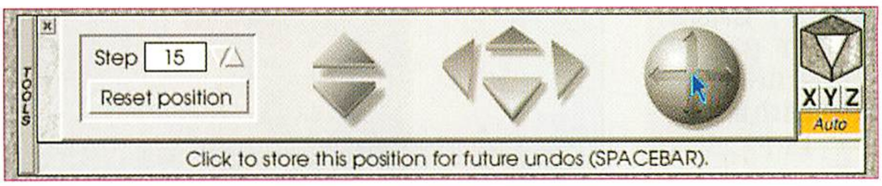
Other functions have icons to represent the effects but some like the envelope and bevelling tools are not very intuitive and can only be understood through much trial and error.

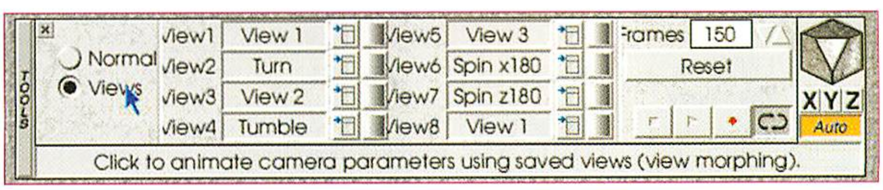
Once mastered these tools can produce stunning modelling and moulding effects only seen on more advanced PC and Mac 3D packages. It's not quite up to Lightwave 3D standards (with which Babylon 5's animated sequences are designed and rendered) but it's good.

The rendering engine also supports bump and chrome mapping of textures,



material?





and the modeller can convert greyscale sprites into altitude maps for the creation of anything from rolling landscapes to hair.

The library is home to dozens of pre-designed 3D objects each with a rendered icon which can be dragged and dropped into your scene. It is a powerful resource but a limited one due to the number of shapes and sweeps provided. The review package did not have any extra discs though it has been rumoured that TopModel 2 was to emerge as a CD-ROM with hundreds of shapes and files on tap. I'm sure Sincronia have a greater stock but perhaps they will market them as a separate resource.

Lighting the scene is easy once you discover that the 'display lights' option is actually in the View Pane toolbar and not an option on the 'lights creation' bar. Sun, point and spot lights can be created with different strengths, colours, as stars or globes and can even be rendered with 'lens flare'. With clever use of lighting and reflective materials you can achieve results that look like a good quality raytracing.

After completing the scene, are many options open. You can navigate the scene using the VRBar which rotates, pans and zooms the camera, not the scene, around the central axis.

You might wish to animate a scene morphing through up to eight views. Alternatively you may require outputting the file as a bitmap or Draw file. As a bitmap, you can rapidly generate huge 24-bit files which ChangeFSI can shrink back to normality, in effect anti-aliasing the image. Final anti-aliased images generated in seconds can look just as stunning as raytraced graphics which would take hours to render even on a StrongARM. You can, of course, export the files as DXF or POVRay if high-end raytracing and animation is a part of your agenda.

The present and future

I have a number of criticisms of TopModel 2. Most importantly, it has taken far too long to finish. Although 90 per cent of what was promised came, 10 per cent of the new features remain unaccounted for. It crashes too easily, often causing late errors in surviving software and sometimes hanging the machine. This is sub-standard relative to much of the rest of TopModel and the majority of other Acorn graphics packages.

The main window re-draw is somewhat quirky when other windows are on top and there is still no option for a traditional three view which some users rely on. And why do re-draws become increasingly flickery with deeper colour screen modes? More colours usually require less dithering but you can now run TopModel 2 in any screen mode.

Despite all this, TopModel remains the most powerful 3D art program on the Acorn. I stress that it is an art or modelling application and not a 3D CAD program. It is designed for effect and the effects it produces so quickly can be astounding, even more so considering the very reasonable price of the package.

I have enjoyed using TopModel 2 and look forward to using it in the future. However, I will not hold my breath for *TopModel Pro*, with all the talk of multi-processor support, NURBS surface modelling, 3D morphing, collision detection and so on. I'm sure that perfectly stable versions with additional plug-ins like radiosity rendering will soon appear but unless this package generates the number of buyers that it mostly deserves, TopModel 2 may indeed be the last word in Acorn 3D modelling, or at least the last word from Sincronia.

• *This month's cover was designed by Jack Kreindler using TopModel 2.*

Product details

Product:	TopModel 2
Price:	£130
Producer:	Sincronia Multimediali
UK Supplier:	Spacetech
Address:	21 West Wools, Portland, Dorset, DT5 2EA
Tel:	(01305) 822753
Fax:	(01305) 860483
E-mail:	sales@spacetech.co.uk
WWW:	http://www.spacetech.co.uk

Running before the wind

Ian Burley continues his look at New Acorn



Peter Bondar

Peter Bondar, who is now Acorn's senior vice president of technologies and engineering, is one of the company's extroverts famous for colourful suits, ties and ski jackets. He is a centre of attraction with Acorn enthusiasts at shows and normally has the most interesting new gadgets to show off and some interesting thoughts on technology and Acorn to divulge.

Bondar appears to revel in being the centre of attention but he insists that inside he's really quite an introvert and finds group session talks with Acorn fans quite difficult. 'Historically in a work environment I have always been somewhat an extrovert. But in a private environment, say at a party on my own, I am quite introverted. Once I know my environment, I become comfortable with it and my extrovert mode comes out.'

Bondar's extrovert qualities have stood the test of time, including a stint as a product marketing manager for corporate computer systems at Siemens Nixdorf — a very large and relatively cumbersome organisation which did not cultivate extrovert qualities in its employees. Bondar's move from Siemens to Acorn came about more by chance than by design. At the time when Iraq was being pounded by Allied forces in the Gulf war, Siemens Nixdorf made 200 people redundant and Bondar was one of the unlucky ones. Mysteriously, the Acorn job seemed destined for Bondar; not only did his recruitment agency suggest the position, but a friend independently drew his attention to the vacancy and he had already noticed an advertisement for the job in the Press.

By then Bondar was tired of the large corporate culture he had endured for a long time and was ready for a complete change, like the one offered by Acorn. Of Siemens Nixdorf, Bondar explains: 'People

Running before the wind

there are all small cogs within a very large mechanism and even then those cogs don't always seem to contribute much to the operation of that mechanism, which wasn't very motivating.' Acorn's compact dimensions and ability to produce interesting technology virtually from nothing, relative to Siemens Nixdorf's resources, was very refreshing for Bondar.

Acorn were not a company of any note to Bondar before he joined. Happily, his previous life at Siemens Nixdorf and other companies like Honeywell and Comshare was not totally wasted on the new tasks at hand within Acorn. Bondar explains that many of the ideas which found their way into the Risc PC, one of his first major projects at Acorn, were ideas he had previously seen in mainframe and minicomputer solutions. Bondar was pleasantly surprised that concepts he presented to Acorn's engineers would be enthusiastically embraced and realised very quickly. His experience in the rigorous and competitive corporate computing world would also be an asset as the company eventually changed tack to becoming technology business partners instead of independent proprietary computer manufacturers.

Unfortunately, Bondar's presence and ideas were not welcomed by all. Bondar says there was a great deal of hostility towards the Risc PC project from certain quarters within the company, especially regarding the PC co-processor feature. 'There were a number of people inside the company who didn't think it would be that successful and had completely discredited the modularity, upgradability and the PC card, etc.' Asked whether many of these critics were still with Acorn, Bondar answered with a smile: 'Generally speaking, no.'

A low point for Bondar was frustration with the management of the company and their lack of financial stability and his patience ran out just before Sam Wauchope was replaced by David Lee. He felt that despite the success of the Risc PC, Wauchope was not allowing Acorn's technology to shine in new vital areas. Bondar's resignation letter was posted in the internal snail mail to Wauchope the day before David Lee, unbeknown to Bondar, was drafted in to replace Wauchope. Bondar was actually driving to a meeting with prospective new employers when Aleph One's Alex van Someren phoned Bondar's mobile phone with the news.

Upon receiving the news, Bondar dramatically did a U-turn in the road and drove straight back to Cambridge to find out if his resignation letter had been opened yet. It had not and was hastily retrieved and disposed of. David Lee's hands-off management style has been quite the opposite of Wauchope's and that has suited Bondar perfectly. Bondar isn't totally critical of Wauchope — after all the two worked extremely hard together to launch the Risc PC. Bondar emphasises that Wauchope always had Acorn's best interests at heart but ultimately wasn't capable of dealing with the problems facing the company.

Long-standing Acorn fans still secretly hope Acorn will one day become a billion dollar world IT power. Bondar is much more down-to-earth than that and doesn't promote the hope that Acorn will necessarily become the next Microsoft or Intel or JavaSoft. Acorn's new-found strength is in being a responsive company which can build technological solutions to customer requirements using innovative ideas. 'With a kit bag of bits, how could we solve the following problem, or whatever?, we are probably one of the best in the world at doing that sort of thing,' says Bondar. Acorn may well be the catalyst in the projects of other billion dollar companies, but the dreams of Acorn being a major manufacturer will probably remain just that — dreams.

Ironically, although Peter Bondar's arrival at Acorn may have directly or indirectly precipitated massive changes within the company, in truth he has managed to reinforce Acorn's long-standing core strengths in being able to generate and apply innovative technology quickly and inexpensively, for which we should all be very thankful.

Kevin Coleman

Kevin Coleman is a very familiar figure to journalists interested in Acorn as he is effectively the corporate mouthpiece for the company. Coleman takes Acorn's depiction by the Press very seriously, but combines this with a welcome sense of humour and a great deal of practical assistance.

He has been with the company a very long time: 'I've been here twice — once in 1985 through to 1988, left for about six months and then came back in 1988.' At that time he was in regional sales and though he left briefly to take on an independent position which didn't work out he was soon persuaded to return to the fold by then-finance director Sam Wauchope and sales chief Terry Shurwood. Since then, Coleman has been at the centre of product launches, marketing and, later, corporate communications and public relations.

Coleman has seen Acorn through thick



and thin and over a very long period in their history so we asked him how things had fundamentally changed over the years: 'There is no comparison now with the type of business we do and the calibre of company we talk to. We are licensing our technology to global players who are at the forefront of IT and we can match them in terms of ideas and skills. In terms of workload and delivery our people have a greater capacity for getting things done, and on time, than many of the organisations with bigger names.'

The metamorphosis from oddball proprietary educational computer manufacturers to global high technology solutions provider has happened very fast and it has been a great challenge to Coleman: 'Three years ago if people had said I would be managing a global communications programme for Acorn I would have laughed.' However, fundamentally, the core of the company probably hasn't changed that much, suggests Coleman: 'In many ways there are very few changes — our people have always been self-motivated and able to develop into new areas. That has always been a strength of the people. What has happened recently is that people have been freed up to do their jobs in a way that they feel comfortable and providing objects are achieved the responsibility is theirs,' a view echoed by David Lee and Peter Bondar, among others.

In the early days, Coleman, like most of his colleagues then, was not readily inclined to accept criticism of the company's strategy or products. However, the company has become a lot less sensitive in recent years, partly because it tackled a serious problem of poor media relations which had existed for some times. Coleman was at the heart of the remedy:

> **our people have always been self-motivated and able to develop into new areas. That has always been a strength of the people**

'When I took over media relations in early 1993, Acorn were not very media-friendly and rather than manage the situation they would close up and pull up the drawbridge if there was an issue. My view was that the Press were vital to us and that they were no different from any other customer — they needed information and a dialogue with the company. By building up relationships we would then generate informed articles and comment about us because the media would be talking to us and know the real story. If they then chose to ignore the facts then 'that's life', we would know we had done all that we could.'

Out went the misguided policy of doing PR in-house and Coleman took the decision to hire a top IT PR company, Text 100. 'They were head and shoulders above everyone else who pitched, they had Microsoft and Intel as clients — so the Press had to talk to them to get information about these companies and using the same agency made it easier for my team to establish meetings or contacts for us.'

The Acorn and Text 100 relationship has culminated in some prestigious awards, including that for Best Technology Campaign beating Text 100's own Microsoft team into second place. 'This was the first award that Text 100 had ever won with any client so I am pleased that the Acorn team actually got it. The second IPR Sword of Excellence Award was won for the use of electronic media in the PR arena — we have the Web site, electronic Newsmails which hit our press list and we provide other information as you know via the Internet.'

One of Coleman's highlights was responding to Apple's mistaken claims that their then new PowerPC Macintosh family was pioneering RISC in consumer computers. Coleman quickly drafted a full page advertisement for the *Financial Times* teasing Apple by welcoming them to the consumer RISC club. Little did he know that Apple and Acorn would work closely enough to form a joint venture in the form of Xemplar Education just a couple of years later. 'It was great fun at the time and achieved our aims of making sure that people knew about Acorn. Really though it was only a little tweak on the nose — we had done the cost/benefit analysis and realised that we couldn't get into the expensive litigation that would have dragged on for years.'

As to the future, Coleman says: 'During the course of this year Acorn cannot rest on their laurels but have to keep on pushing the technology forward in new and innovative ways; capitalising and growing their own NC market, continuing their interactive TV push (because this is the future) and developing into new technology markets.'

Brendan O'Sullivan

Brendan O'Sullivan does not work for Acorn, or at least not directly. O'Sullivan is the managing director of Xemplar Education, the 50/50 joint venture between Acorn and Apple Computer which is now exclusively responsible for both parent companies' products being sold into primary and secondary schools in the UK. As such, O'Sullivan works closely with Acorn — and Apple of course — and is responsible for developing a market which remains very important to Acorn.

O'Sullivan may be a 'suit' today, but he's an enthusiast at heart and started his career in computing as a programmer. 'All those years ago I was an operator on a ICL1902T mainframe working for the Guinness company. I've always worked in the computer industry,' explains O'Sullivan. He later worked for an Apple distributor and was involved in the setting up of Apple's Irish subsidiary.

So O'Sullivan has Apple roots, but he has proved to be very adept at walking the Xemplar tightrope between Apple and Acorn. There has never been any sign of undeserved bias in favour of Apple products in O'Sullivan's strategy since Xemplar was first set up just over a year ago. He reveals that the balance of sales was tipped in Acorn's favour from the early days at Xemplar, but it's looking more balanced now.

Bringing together the two cultures of Apple and Acorn was certainly a huge challenge. The majority of Xemplar's staff are ex-Acorn and the Xemplar HQ is situated barely five minutes by car from Acorn's Newmarket Road base. Although there has been little external sign of trouble, O'Sullivan openly admits there were difficulties at first, not least from staff who initially felt rejected by their parent companies. 'Prior to Xemplar and probably fuelled by the 'common enemy thing' there was what might be described as a grudging regard for each other's products,' says O'Sullivan. When ex-Apple people were faced with Acorn computers to sell and vice-versa a lot of effort was required by everyone to come to terms with their new situation.

Fortunately, O'Sullivan was able to find a lot in common between Apple and Acorn. For one thing, both shared the threat of PC domination and both companies enjoyed a similar appetite for technologically innovative products. 'When you cornered an Acorn person and asked them about Apple stuff, you'd get the grudging response that, yes, that Apple stuff is good stuff, not as good as 'ours' but good stuff nonetheless and it was the same vice-versa with Apple people.' O'Sullivan quickly decided he had to find and exploit the similarities between the two cultures within Acorn and neutralise the differences.



One of the first things O'Sullivan did was to switch to using a Risc PC on his office desk — a clear signal that while he was Apple born and bred, he would set an example of getting to know Acorn products intimately. However, his trusted Apple PowerBook portable is always nearby at press meetings away from base. Certainly at this stage in the short life of Xemplar, O'Sullivan views Acorn and Apple products as being equally vital for the success of the company: 'We have two revenue streams, one Apple, one Acorn and we cannot survive without either one. We cannot, therefore, de-emphasise one or emphasise at the detriment of the other. I am capable of being pragmatic and saying; this Acorn business is vital to us, this Apple business is vital to use so what do we need to do to maintain this vitality?'

Part of the answer was to ensure that the expertise and enthusiasm for respective brands was maintained and not diluted within Xemplar. At the same time respective staff are now expected to shield their colleagues from the less suitable aspects of their 'home' products and O'Sullivan readily admits that Apple and Acorn products, respectively, have big strengths and big weaknesses in similar measure.

O'Sullivan happily reports that most of the early cultural problems at Xemplar have been ironed out and the team works remarkably well. Xemplar's emphasis on a balance of business between Acorn and Apple products extends to Xemplar's agent companies and has been, if anything, a greater challenge for them. Those agencies who have not managed to embrace one or the other family of products have had to be weeded out, much to the disappointment of certain Acorn and Apple dealerships.

O'Sullivan comes across as an amiable and bubbly Irishman but underneath the pleasant exterior is a very determined personality. He has proved that Apple and Acorn people can work very productively together under Xemplar and the company is now going from strength to strength, making a small profit in the second half of its first year. There are many challenges ahead for O'Sullivan and his team, but one is left feeling confident that Xemplar is indeed well equipped to meet these challenges. AU

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(See also the "2nd user" section)	
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RISC OS 3	£39 (45.82)
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(Dealer fitting recommended for the ARM3)	

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1-4Mb	£75 (88.12)
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RISC PC

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A310

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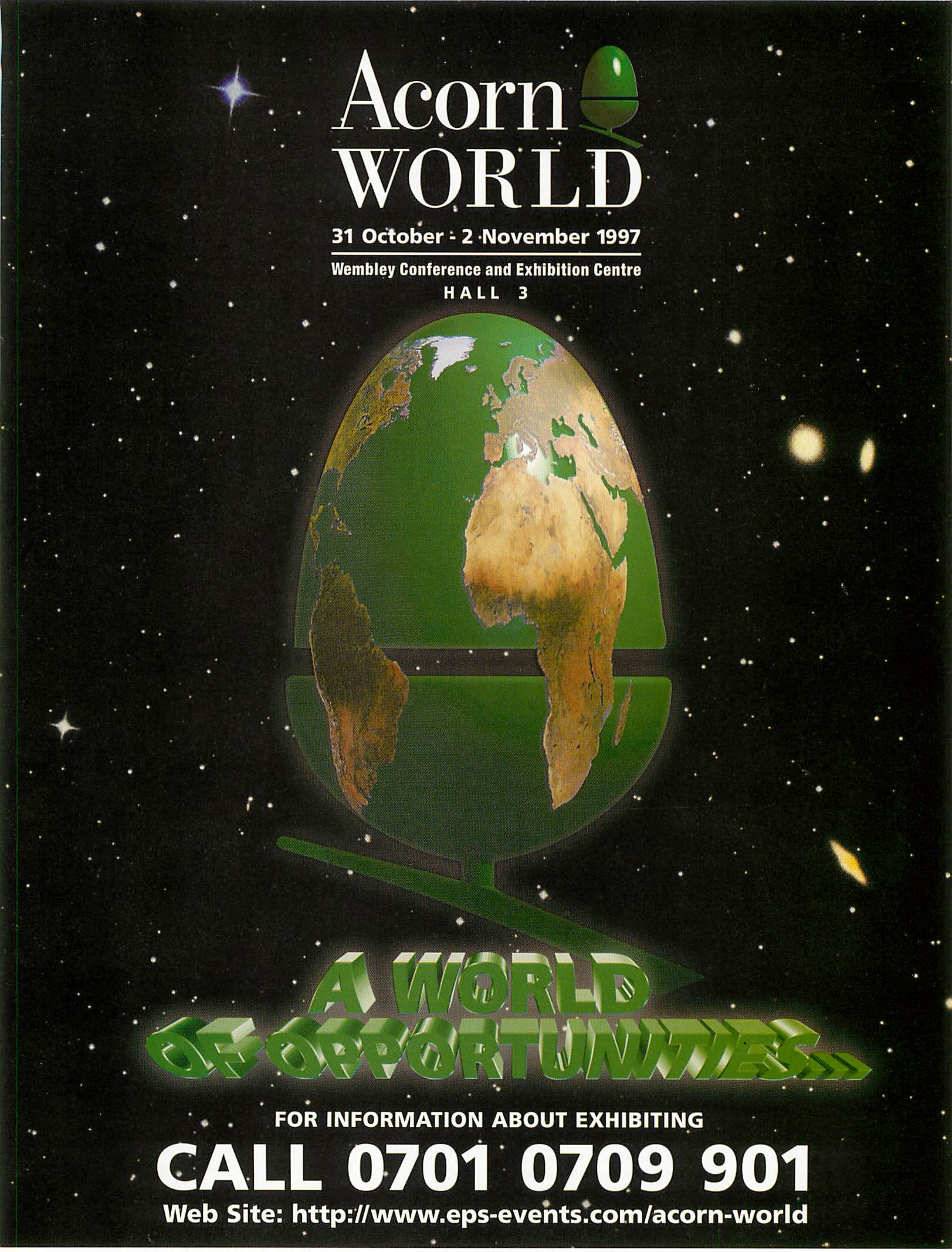
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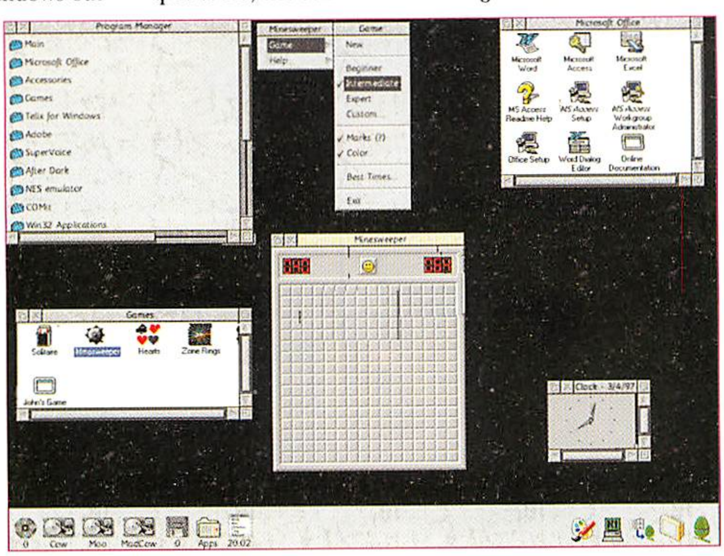
WinRisc
faster than a speeding glacier?

Matthew Bloch and **Pete Taphouse** find a revolutionary piece of software isn't quite what they expected

Matthew's experience

Risc PCs have always had a decided robustness about their ability to run Windows software alongside native RISC OS programs, albeit so far with little integration between the two environments. Gates' bloated OS runs neatly in a RISC OS window, and doesn't interfere with normal activities. Not so, say ARMed Forces Software, who were taking pre-release orders of *WinRisc* way back at the Acorn World '96 show.

What ARMed Forces promised us was a program that would take the windows out of Windows 3.11 and draw them alongside our normal RISC OS windows, neatly replacing the alien Windows borders with friendly RISC OS ones and changing the pull-down menus to the pop-up ones we Acorn owners are used to. So, from our point of view, we can start Windows applications, run them alongside RISC OS ones and not need to know the difference. A seamless piece of patchwork which helps the uneasy Acorn owner cope with the distasteful Industry Standard working environment. Thus spake the advertisement, at any rate.



Installation of WinRisc is simple – it comes as a single RISC OS application which installs and uninstalls the PC side of WinRisc very easily. So I held my breath and started *!PC*, which, as always, I have running in single-tasking mode. This evidently confused WinRisc, and the Program Manager windows started to jump around and changed size without my intervention. It dawned on me, after reading the manual, that maybe WinRisc needed to run with the !PC software running in multi-tasking mode, so a click on the middle button and suddenly a lot of things started happening: the PC card window disappeared and WinRisc started to work.

With WinRisc running, the Program Manager was replaced entirely by a pretty list of folders in a window which yielded the usual program groups when clicked on. My first instinct was to load MSWord, and this is where any euphoria you might have had about WinRisc should be dispelled. My PC card is an SX33, perfectly usable and fast under normal circumstances; WinRisc crippled it. The Word window was updated approximately every four or five seconds; this was without any other programs loaded. I managed to type three lines of text before WinRisc got around to updating the window display. Even when I clicked on the close box to quit Word, the confirmation dialogue took around a second and a half to pop up.

At this point, I decided to try something a little less taxing; a game of *Minesweeper*. This could be described as slightly better: it takes a lightning two seconds to realise mouse clicks on the board!

This raises the question that if I can't play Minesweeper without ruining my usual time to solve a grid, what use is WinRisc? I addressed this question to the author who said: 'WinRisc was written to ease integration of Windows and RISC OS and to save on people learning the two environments'. He admits, though, that 'there are limitations' which are due to the 'appalling transfer rate between the PC and Acorn sides of the !PC software' which delayed WinRisc's release by six months. Surely if ARMed Forces are going to ask money for WinRisc, the very least they could do is make sure it works at an acceptable rate, whatever the state of the !PC software they're patching? This is where I'm wrong, says Chris, it'll run twice as fast on an SX33... in a 16-colour screen mode. Sadly, twice as fast is still far too slow (I didn't notice the difference), and the window redraw wasn't perfect in this new mode; stray black lines appear when overlapping windows slide over each other.

Besides the re-draw problems and general sloth of the program, WinRisc has a talent for crashing the PC card software if you do patently stupid things like re-opening the !PC display window, or asking it to open the Program Manager icon at the wrong moment (just after you've started Windows, for instance). For a program which claims to invisibly knit together RISC OS and Windows, WinRisc fails on account of being too slow (even on a DX100/StrongARM processor combination) and too unreliable, even for the 'casual user' for whom Chris Claydon claims it is best suited. I find it outrageous that ARMed Forces can justify charging £30 for a program which is too slow to be of any use, even on a DX100/StrongARM combination and the latest versions of the PC software.

Before damning WinRisc entirely, I feel obliged to mention the drag-and-drop facilities which allow files to be transferred to and from your PC partition. This integrates with *ImageFS* to convert file formats to sprites, and it does it very well. Also, apart from the odd blank menu items, the pop-up menus work well too. However, the potential usefulness of these features is eclipsed by the pain of waiting for windows to update. Chris told me that I would have no complaints about the speed if I ran WinRisc in a 16-colour mode, on the latest version of PC Pro with a 586/100 or 133 card. This hardly holds with the 'casual user' who is meant to rep-

WinRisc faster than a speeding glacier?

resent WinRisc's typical user. Who would want a high-end PC card unless speed was at a premium? And who, after spending several hundred pounds on a fast PC card, would want to limit it to 16 colours, or just use it for the 'odd bit of word-processing'?

ARMed Forces blame WinRisc's speed on the PC software, but in the end it's their responsibility to make WinRisc work with whatever the limitations.

WinRisc under Windows 95 — Pete's view

When initially offered the chance to offer a second opinion of WinRisc I considered testing various setups. With two Risc PCs within spitting distance I decided to compare WinRisc running on combinations ranging from and ARM6 with a 33MHz 486 card all the way up to a StrongARM with DX4-100 PC card.

My usual PC card setup was on the DX4 with 16Mb allocated running Windows 95. I decided the tests should use four applications: *Notepad*, *Minesweeper*, an AVI video player, and Adobe *Photoshop*.

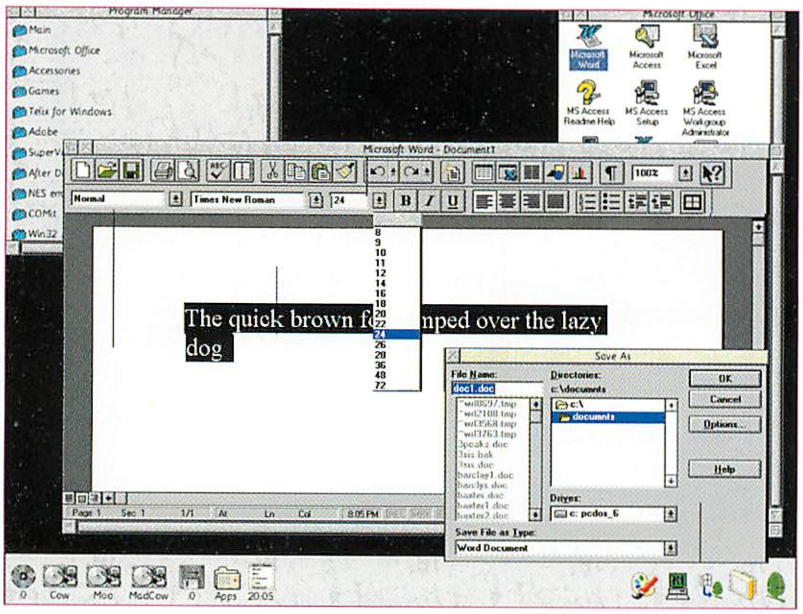
I tried the applications on my usual setup and all were perfectly acceptable, perhaps with the exception of Photoshop, but that was only to be expected. Now it was time for the real testing to begin. WinRisc was loaded – Windows 95 operating system was selected the hard disc partition duly revealed and the install button clicked upon. So far so good.

Once 95 was loaded not a single WinRisc window opened and there was nothing to be seen on the WinRisc iconised menu. It was only when I clicked on the start menu on the PC Card window that any signs of life were to be seen. With a slight delay a small duplicate of the window burst forth upon the RISC OS desktop.

It took a communique from ARMed Forces to inform me that in order for WinRisc to be used with 95, certain windows had to be configured to open on startup, or alternatively to re-use the wonderful 3.11 Program Manager.

If this point had been the only objection, it may have been forgivable, since WinRisc 1.30 only boasts 'Basic Windows 95 support', but unfortunately the worst was yet to come.

WinRisc is slow. Once I had discovered this, all thoughts of testing different setups disappeared without a trace, but I resolved to try at least some of the applications mentioned above. Once Notepad had finally loaded itself I resolved to type the classic quick brown fox sentence, which I duly did, and so did WinRisc... two seconds later, at least that was when it started writing it – it finished about another two seconds after that.



So much for the simple applications. It was now the turn of something a little more challenging, and admittedly cruel, given WinRisc's previous performance: the AVI file. I already have Video for Windows installed so the mission seemed simple. All that was required was for me to click twice on top of the file. The sequence went something like this: two clicks, wait, nothing happens, two more clicks, wait, nothing happens, a couple more, nothing, give up.

In a last desperate attempt I clicked about eight times in a row and the hard drive whirred into life... and up popped two copies of the file running at about five seconds per frame. Needless to say I eventually closed the two movies, and managed to load just one of them, but this time there was no animation at all, just the odd piece of sound sample. After exhaustive attempts I managed to produce an animation of about one frame per second, but that was on the fifth attempt.

At the time of writing, ARMed Forces hope to have the MovieFS drivers perfected so that video can be handled natively (at speed) by the ARM processor.

It is has to be said, that despite all I have read about WinRisc integrating the two environments I was very disappointed when I actually got to see the finished product. It may have all the features it claims, but when it comes down to it the speed of the program, running on a StrongARM and DX4/100, it is rendered entirely useless for any serious work, and entirely frustrating for anything more occasional.

Product details

Product:	WinRisc
Price:	£29.95
Supplier:	ARMed Forces Software
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Acorn Club Scene

Neil Spellings tells us about his new project as chairman of the Association of Acorn User Groups

Since the early days of the BBC Model B, the concept of the 'computer club' has been with us on the Acorn scene. Although technology has moved on there are still a fair number of Acorn user and enthusiast groups around the world (35 at the last count).

Why join a computer group?

Computer or user groups bring together people with a huge range of abilities and experiences, from the complete beginner who might only use *!Draw* and *!Paint*, to the 'hardened techie' who's probably a Clan member and has every Acorn system in existence.

User groups allow people to talk – which is probably the most important and productive aspect. I know from my experiences with DARC (Derbyshire Acorn Risc Club) that just getting together and discussing experiences and problems with other Acorn users can provide a wealth of information and advice.

Most user groups have a monthly newsletter informing members of the latest developments in the Acorn world and most also organise guest speakers to visit and talk about a particular subject or software package – sometimes offering the product to members at a reduced price.

Many user groups also arrange their members to get discounts on various Acorn products.

There are also a number of groups who are postal or Internet-only, such as the ARM Club and Acorn Enthusiasts Group – for those who can't spare the time to attend meetings.

What is the Association about?

As all the Acorn user groups are working towards a common goal but are rarely in contact with each other, I set out on a venture to promote communication and co-operation between all the individual groups around the world.

Out of this the Association of Acorn User Groups was born.

I have contacted many groups over the Internet and the information I've received can be seen in the table. If you are involved in running an Acorn computer club and are not on the list, please contact me to get yourselves registered.

Association objectives

- **Maintain a global directory for all Acorn clubs and groups**

This list will be included with all new Acorn systems sold and will appear in the Acorn press. It will give new users a contact in their local area, other than their dealer, to whom they can turn for help and meet other people with like systems.

- **To create a larger 'force' in the Acorn market**

This will allow us to:

a) Pool resources and offer a better service to members. Where clubs are located in adjacent areas, organise more joint events. We want to encourage and support those groups who wish to do something along those lines and provide things such as contacts for other clubs who may be willing to help out.

b) Have a larger impact and more influence on the market with regard to products we'd like to see etc.

We may not be able to influence major hardware designs but as a much larger group we would be able to put more pressure on companies who would normally ignore individuals or smaller groups. Examples are where companies refuse to fix bugs or offer poor customer service.

- **Offer a centrally managed discount scheme**

Many of the existing groups have negotiated their own discounts from local or national Acorn suppliers. This will be centralised to offer members of all the groups an improved range of discounts, thus attracting more members and benefiting existing ones.

This would also be beneficial to Acorn software and hardware vendors, as they will only have to deal with one contact instead of many around the country. They will also appear in a 'discount directory' which is a list of companies who are prepared to offer members of all the computer groups discounts on their products or services.

We are also working closely with the ARM Club, which is the largest of the Acorn user groups to ensure the best possible discounts from as wide a range of suppliers as possible.

Club name	Public contact name	Address/phone
Derbyshire Acorn Risc Club	Mike Smith	The Vicarage, Brassington, Matlock, Derbyshire, DE4 4DA 01629 540281
Acorn Enthusiasts Group	Neil Farnham Smith	N/A
Acorn Usergroup Austria	Tassilo Halbritter	Laa1, A-3040 Neulengbach +43 2772 54654
Acorn Users Auckland (CityARM)	G Plumpton	35 Laurie Avenue, Parnell, Auckland 1 +64 9 3790278
Acorn Users Auckland (ShoreARM)	G Plumpton	35 Laurie Avenue, Parnell, Auckland 1 +64 9 3790278
The ARM Club	Chris Price	FREEPOST ND6573, London, N12 0BR 07010 709849
ARMada	Mirko Vidovic	125 rue des Charmettes, 69006, Lyon (+33) 478 247 740
Arche Acorn User Club	Carlos Michael Santillan	
Bristol Acorn Risc User Group		
BeebNet	Hank van der Wijngaart	8 Anzac Street,Salisbury Heights, 5109 61 8 8250 4472
Big Ben Club	Herman Corjin	Postbus,1189, 6801 BD +31 (0)71 4080339
Birchwood Computer Club	Alan Clarke	0151 430 7359
Bottisham Acorn User Group	David McDowell	9 Chestnut Close, St Ives, Huntingdon, Cambs. PE17 4UQ 01480 381996
C Acorn User Group	Paul Field	
Canberra BBC User Group	Victor Markwart	16 Cruikshank Street, Wanniassa, ACT 2903
Christian Acorn User Group	Rev. Colin Randall	The Rectory, Swan Lane, Long Hanborough, Witney, OX8 8BT 01993 881270
Hamilton Acorn User Group	Rene Turner	
Liverpool Enthusiasts Group	Tom Hebbron	Dr Fred Wilburn, 26 Roe Lane, Southport, PR9 9DX 01704 530741
Northwest London Computer Club	Chris Dunn	74 Conifer Way, Sudbury Meadows, North Wembley, Middx, HA0 3QR
Portsmouth & Southsea Computer Club	Paul Vigay	17 Wadham Road, North End, Portsmouth 01705 871530
Southampton Acorn Users Group	Ted Lacey	50 Cromwell Road, Midanbury, Southampton, SO18 2QZ
Suffolk Acorn User Group	Paul Skirrow	
Surrey & Sussex Acorn Users Group	Geoff Arnold	SASAUG, Horsham Methodist Church, London Road, Horsham, West Sussex, RH12 1AN 01403 253915
Victoria BBC Users Group	Ted Robinson	31 Curtin Avenue, West Brunswick, Victoria 3055 03-9386 1402
Wairarapa Acorn User Group	John W Dagg	BBC Acorn User Group, c/o John W. Dagg, 39 College Street, Masterton 5901 (09) 377 0564
Wakefield Computer User Group	Chris Hughes	95 Cumbrian Way, Lupset Park, Wakefield, West Yorks 01924 379778
NAMEBUG	Dan Glading	43 SpaldingWay, Great Baddow, Chelmsford, Essex, CM2 7NZ

E-mail/Website	Country	Meeting frequency	Meeting place	Next meeting	Topic	Second meeting	Members	Adult Subs	Family Subs	Coverage	Notes
D.A.R.C@argonet.co.uk http://www.argonet.co.uk/darc.htm l	UK	2nd Monday of month	St Alkmunds Church Hall, Duffield, Derbyshire	14/07/97		08/09/97	45	£15	£20	Derbyshire, Staffordshire, Nottingham	
neil@a-e-g.demon.co.uk http://www.a-e-g.demon.co.uk/	UK	N/A	N/A				300	Free	Free	Worldwide	Internet only group
tassilo.halbritter@aon.at http://ourworld.compuserve.com/h omepages/pbauer1	Austria	1st Thursday of month	Restaurant Regina, A-1150 Wien Huetteldorferstrasse 49 clubroom	04/07/97		07/08/97	20	Free	Free	Austria	German speaking only
johnb@ihug.co.nz http://shell.ihug.co.nz/~snookums/ index.htm	New Zealand	2nd & 3rd Wednesdays of month	Aukland Hospital Staff Club, Grafton Road, 1				73	$NZ30	$NZ30	New Zealand	
johnb@ihug.co.nz http://shell.ihug.co.nz/~snookums/ index.htm	New Zealand	1st Thursday of month	Sunnynook Community Hall, 148 Sycamore Drive, 10				73	$NZ30	$NZ30	New Zealand	
info@armclub.org.uk http://www.armclub.org.uk	UK	N/A	N/A	06/12/97	Acorn SE Show	01/03/98	1000	£12	£12	Worldwide	Postal group only
mirko@cyberline.fr http://www.armada.ldh.org	France	n/a	n/a				50	250fr		France, Europa, North Africa	Monthly newsletter in French
cms@koeln-online.de http://www.koeln-online.de/ inis/arche/	Germany										
http://emrs.chm.bris.ac.uk/ARUG/ ARUG.html	UK	Last Wednesday of month	The Long Room, Burden Neurological Institute, Stoke Lane, Bristol.	30/07/97	Sherston?		40	£7	£7	Bristol, Glos, S Wales, Wilts, Somerset.	
hvanderw@ozemail.com.au	South Australia	1st Monday of the month	St. Peters College Junior School, Adelaide, South Australia				6	Free	Free	Metropolitan Adelaide	
bigbenpr@nedernet.nl http://www.nedernet.nl/ ~bigben/	Netherlands	Monthly per region	Depends on region				600			Netherlands	
nigel@c3po.demon.co.uk	UK										
mcdowell@intecc.co.uk http://www.jenkin.demon.co.uk/ba ug.html	UK	7:30pm 2nd and 4th Tuesdays of month	Room 47, Design & Technology Building, Bottisham Village College, Lode Road, Bottisham, Cambs. CB5 9DL	09/09/97		23/09/97	20	£10		Cambridge-shire, North Essex, Bedfordshire, Suffolk	
paul.field@dial.pipex.com http://www.acorn.co.uk/associates /caug/	UK										
markwart@pcug.org.au http://www.pcug.org.au/~markwart /canbug/canbug.html	Australia									Canberra, ACT	
carandall@argonet.co.uk http://users.ox.ac.uk/~hu94003/Ac orn/caug.html	UK	N/A	N/A				113	£4	£4	Worldwide	Postal group only
	New Zealand										
LEG@hebbron.demon.co.uk http://www.hebbron.demon.co.uk/ LEG/	UK	2nd Tuesday of month	Birkenhead Boys School, Southport	12/08/97	TBA	09/09/97	30	£12	£15	Mersyside/ Cheshire	
	UK	7:30pm 3rd Wednesday of month	Sidings Community Centre, Brassey Road, West Hampstead, London	16/07/97	TBA	20/08/97	8	None	None	Anywhere in London	Small charge to cover room hire
pvigay@cix.compulink.co.uk http://www.interalpha.net/custome r/pvigay/shareware. html	UK	2nd and 4th Tuesday of month	17 Wadham Road, North End, Portsmouth				10			Chichester, Southampton, Portsmouth.	
tedell@argonet.co.uk	UK	2nd Monday of month	Itchen College (1st floor), Middle Road, Sholing, Southampton	14/07/97	Members problems	08/09/97	20	Free	Free	South Hampshire	
sarc@octosys.co.uk http://www.octosys.co.uk/ sarc.html	UK										
sasaug@argonet.co.uk http://www.poppyfields.net/ sasaug/	UK	7:30pm 2nd Monday of month	Horsham Methodist Church, London Road, Horsham, West Sussex, RH12 1AN	07/07/97	Chris Clayton of ARMed Forces	08/09/97	35	£12	£12	Surrey and Sussex	
vicbug@vicnet.net.au http://www.vicnet.net.au/ ~vicbug/	Australia	Last Wednesday of month		30/07/97	Useful PD software from the Web	27/08/97	60	A$45			
jwd@winz.co.nz	New Zealand	Irregular	39 College Street, Masterton				18	Free	Free	Wairarapa province	
wacg@cumbrian.demon.co.uk http://www.cumbrian.demon.co.uk /wacg/	UK	1st Wednesday of month	West Yorkshire Sports & Social Club, Sandal Hall Close, Sandal, Wakefield	05/08/97	TBA	02/09/97	110	£10	£20	Yorkshire	
dangiading@lineone.net	UK	7:45pm 2nd Thursday & 4th Wednesday of month	Witham Library, Newland Street, Witham, Essex	12/07/97		11/09/97	12	£15	£20	Essex	

Acorn Club Scene

• Promote communication and co-operation between clubs

This is important – all the clubs should communicate more. This will take the form of a centralised Web site and Internet mailing list, and possibly a newsgroup to follow.

• Promote the Acorn platform to the 'non-converted'

Obvious one this, but if we get enough support the association could exhibit at non-Acorn shows.

• Exhibit at Acorn shows and allow individual clubs to promote themselves

We would look at co-ordinating clubs to exhibit on an association stand, and give all clubs an opportunity to promote themselves at the big Acorn shows.

• Plan and co-ordinate guest speakers around the country

Many companies are prepared to visit Acorn user groups and demonstrate their products.

We'd look into keeping a directory of companies willing to participate, and encourage more companies to visit clubs. We hope to save them valuable time and money by co-ordinating talks around the country and just having one point of contact for all the Acorn clubs.

We'd also maintain lists of companies willing to give sponsorship and promotion help in newsletters, shows and magazines.

• Assist in the creation of more local Acorn groups

Do you know of other Acorn users in your area? Is your nearest Acorn user group hundreds of miles away? Why not form your own?

The association can provide assistance by drawing on the experiences of its members to assist groups of people in creating their own local Acorn user groups.

We will also be affiliated to the British Association of Computer Clubs, and thus can provide new clubs with details of issues about being an organised group (such as public liability insurance).

Of course, as the association grows and matures, the above aims of objectives may change, depending on the needs of our members.

We want to hear from YOU!

Please get in touch if:

- You are a group of Acorn users who wish to start your own local user group or
- An existing Acorn user group who wishes to join the Association or
- An Acorn software developer or dealer who has not yet joined the discount or demonstration scheme.

Due to moving house the only point of contact with me at present is via e-mail: neil.spellings@argonet.co.uk

Please keep an eye on the association's temporary homepage at http://www.argonet.co.uk/scs/association.html for updated information and news.

Design a logo competition

As the Association is brand new we haven't got a logo yet. So here's an opportunity to use your design skills to create one which will appear on all the Association's stationery, Web sites, articles etc – plus there's a superb prize for the best submission.

The winner will be decided by a vote from all the Acorn user groups who are currently members of the association.

First prize

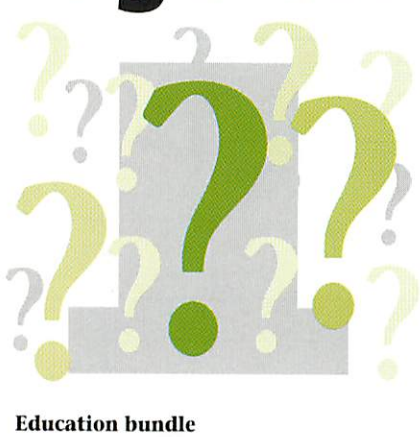
The winner will receive **one year's free subscription to *Acorn User*** and an **8Mb SIMM for A7000/RiscPC** from Tower Electronics plus a choice of **one** of the following software bundles.

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Shuggy from Werewolf Software
High Risc Racing from Modus Software
Last Offence from Modus Software

Runners-up prizes:

Undelete from Quantum Software
Blinds from Quantum Software

Please note

- Entries can be in colour but must also look good in monochrome
- Must be in either *Draw*, *Sprite* or *ArtWorks* format (entries created in *PhotoDesk* should be saved as Sprites)
- The logo does not have to incorporate AAUG, although if it doesn't it should represent what the club is about.

How to enter the competition

Entries should be sent on disc to:
Acorn User Logo Competition, Acorn User Magazine, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP, England.

Or alternatively e-mail your entries to aucompo@idg.co.uk

Closing date for entries is 31st September 1997

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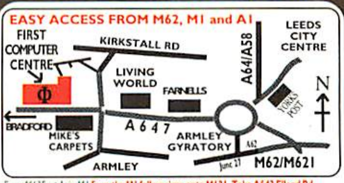
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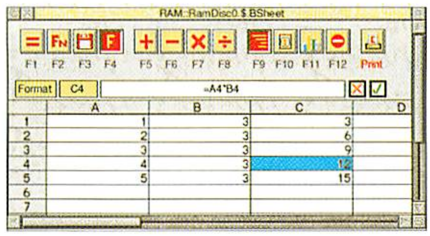
Disk labels x1000 £9.99

A new approach to spreadsheets

Of all the areas of the Information Technology National Curriculum, the use of spreadsheets seems to give teachers the most headaches. I believe that one of the reasons they are experiencing difficulty is because of the software available. Most spreadsheets are incredibly complicated and for children, particularly young children, they are often bewildering.

Eric International have recognised the problem and have developed a spreadsheet with enough features to make it usable but is simple to use. *BearSheet* is part of and integrated software suite called *BearWorks* (the other programs in the set are a word processor called *BearWords* which is available now and a database called *BearBase* which is on the drawing board).

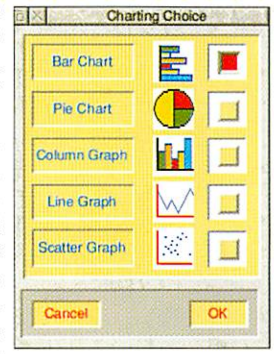
BearSheet has been designed specifically for young children but is versatile enough to be of use in Key Stages 1, 2 and 3. The feature which makes this program suitable for such a wide age range is the two distinct levels of operation – Elementary and Advanced. The level is selected from the



application icon menu on the icon bar. The Elementary level allows access to only the basic facilities which are quite adequate for younger users. For more advanced users, selecting Advanced will give access to some additional features which will be required in Key Stage 3.

The program features full graphing with a choice of five different graphs which are active – the graph updates as the data in the sheet is altered.

Graphs – and indeed all functions – can be selected from either the function keys or the on-screen function key strip. Other features include saving in CSV as well as native format. The graph can be saved as a *Drawfile* enabling it to be dropped into a DTP package.



As with most modern spreadsheets, the mouse is used to select cell names to create formulae. Where brackets are required in a formula, both brackets are given and the cursor placed thoughtfully between them. Once this technique is mastered pupils will find they will be able to operate most spreadsheets on all platforms. This, I believe, makes BearSheet *the* spreadsheet for primary/early secondary schools.

BearSheet costs £29.95 (inc VAT) or £59.90 (inc VAT) for a network from Eric International who may be contacted on (01903) 872400.

Faster network

Compared to a couple of years ago, not a great deal of new software has appeared for the Acorn network world. If you started off using Acorn's *Level 4 (Release 3)* fileserver software it's likely you're still using it, unless you've upgraded your network to PC fileservers. For as long as I've been using Level 4, there has been the promise of a better version although it never seemed likely that this would be sourced by Acorn.

Now at last Network Solutions (who developed the original Level 4) have announced the *Advanced Level 4 Server* upgrade which is a direct replacement for the old Level 4 software. The software is optimised for Ethernet, RISC OS 3 and StrongARM and is claimed to run up to 10 times faster than the existing Level 4 and appears to support all the software currently in use.

The cost is £249 + VAT but if ordered before the July 31, it will be just £199 + VAT. This covers the use of the software on up to three fileservers with 2,048 clients per server. A full review will follow after I've had time to evaluate it fully .

Network Solutions may be contacted on (01487) 843763, fax 0585 076713 or e-mail sales@planet.demon.co.uk. Alternatively look at their Web site: http://www.planet.demon.co.uk/

Help en Francais

I'm always pleased to receive mail from readers, especially when it comes from overseas. Eric Auxerre from Etais-la-Sauvinyonne wrote asking for help. He is a primary school teacher and an Acorn fanatic – so I immediately took a liking to him.

In a few months, a multimedia show will take place in his home town and Eric is keen to demonstrate Acorn's superiority over other systems. He is looking for some teachers from English schools (primary for preference) who could exchange some text and drawings in an Acorn compatible format so he can produce some multimedia productions to demonstrate.

This could be a golden opportunity for someone to get their hands on some text and graphics by French 7-year-olds. Who knows, an Anglo-French multimedia production?

Contact Eric Auxerre at CIDEX 1017, 58500 oisy, France, and please let us know about anything that might be of interest to other *Acorn User* readers.

Pharaoh enough

Anglia Multimedia have released a new CD-ROM – *Ancient Egyptians,* for Key Stage 2 History. Pupils are taken on a journey from the pyramids to the Nile valley and beyond with the help of seven 'guides'. Each character explains aspects of Egyptian society and there are objects to click on and learn about in each environment.

The challenge for pupils is to complete a puzzle or task about each character to win an object which will help the Pharaoh ascend to the afterlife. The package comes with photocopiable activity sheets and for those with Internet access, the disc automatically links with Anglia's Web site which contains links and additional material.

Ancient Egyptians costs £40 ex VAT. Contact Anglia Multimedia on (01603) 615151.

Contacting me

You can contact the Education page by writing to me, Geoff Preston at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aueduc@idg.co.uk

DTP made really easy

Geoff Preston looks at the latest DTP package for very young children

One of the most popular primary word processors for the BBC was ESM's *Folio*. It was popular with teachers of very young children because it was about as simple as it could possibly be – very easy to get started and you could get some pretty good results. Of course, there were a great number of things it couldn't do, but that didn't matter because it wasn't aimed at professional word processing, but at young children.

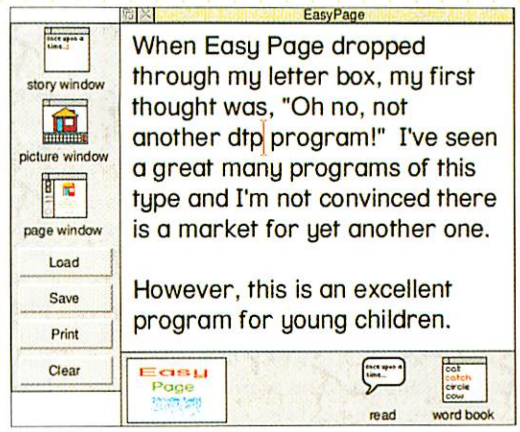
Porters Primary Software have now released a program which, although entirely unrelated, nevertheless was developed with a similar philosophy: keep it as simple and as straight forward as possible. The result is *EasyPage*, a DTP package for children aged four upwards.

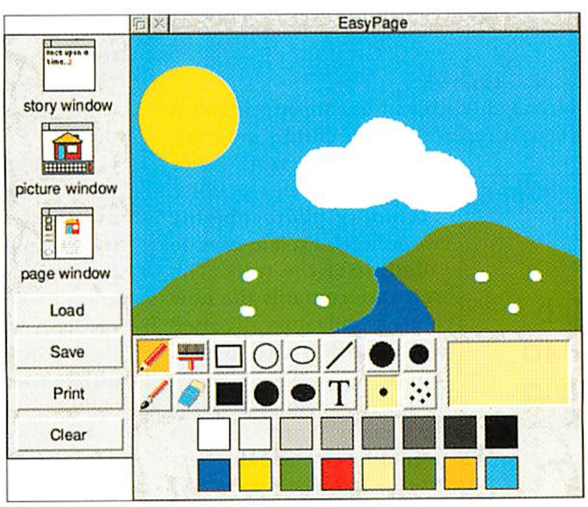
EasyPage enables children to create a single page of either text, graphics or text and graphics with the graphic either at the top or the bottom. The software contains everything needed to create a page including the facility to produce simple pictures. All that is needed in addition to the program is a RISC OS printer driver to print out the work.

Features

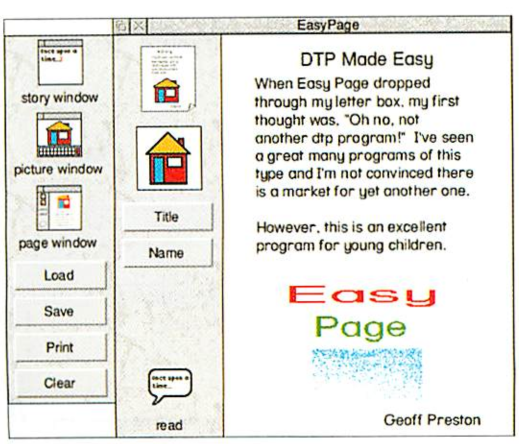
The story window will hold about 60 words if typed in the supplied font, *Infont*. It's not possible to alter the size of the font, so to get more words on the page, you'll need to switch to another font which has been created in a smaller size.

EasyPage has a variety of tools built-in for creating simple drawings. It's basically a bit-map editor (not unlike *Paint*) and will enable children to create simple pictures to illustrate their story. Tools include pencil, paint brush with three thicknesses plus spray, fill, rubber, text etc. The graphic, when complete, can be located either at the top of the page or the bottom.





A simple setup window enables the teacher to set the work directory, change the font and alter the settings for the word book and the speech. Once set, the choices can be saved so they are automatically loaded when the program is run.



What else?

Included with the program is Jonathon Duddington's speech synthesis module which can read out the text that has been entered. It will also read the selected word from the word list.

One feature I was very pleased to see is a word book which has words in both alphabetical order and in topics. A word may be highlighted and automatically typed into the story.

A variety of files can be imported including *Draw*files, sprites and text. EasyPage will save work out either in its own format, as text or as a sprite.

Conclusion

When EasyPage dropped through my letter box, my first thought was, 'Oh no, not another DTP program!', as I've seen a great number of similar offerings over the years and most have fallen by the wayside because the market only seems to be able to support a limited number of packages of a similar type.

It's a pity EasyPage didn't come on to the market a couple of years ago because it would, I'm sure, have cleaned up. It's a superb program with some excellent features. As it is, it has to compete with *Textease* and *Pendown*, both of which are well established. If you don't have a DTP package and you are looking for one, you should consider it.

There is a demo version on the cover disc which does everything the full version does, except save and print.

Product details

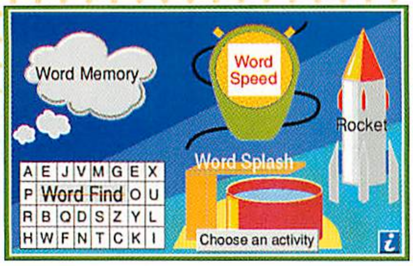
Product:	EasyPage
Price:	£49.95 for a three-computer licence and £79.95 for a full site licence
Supplier:	Porters Primary Software
Address:	138a Harvey Clough Road, Sheffield S8 8PG
Tel:	0114-258 2878

Education Software

REVIEW

Speel it rite

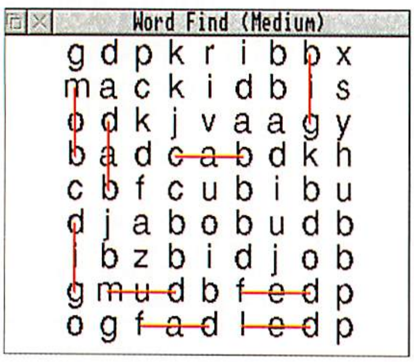
Geoff Preston looks at two new programs designed to help improve spelling



Superspell by 4Mation

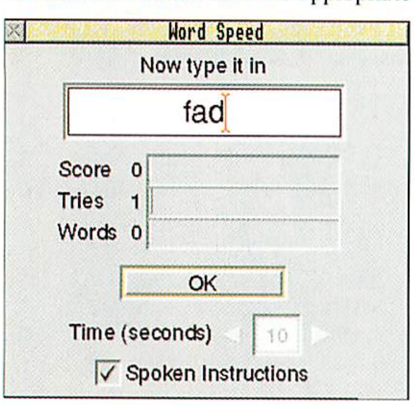
This is a comprehensive package based on a sequential development of spelling skills. Exercises range from simple three-letter words to more complex multisyllabic words. The material accesses 3,200 words in 160 20-word lists which highlight particular spelling patterns or rules.

The software contains five activities designed to assist students of all ages



develop and improve skills while working at their own pace.

Word Memory: Of all the activities, this I feel is the best. The computer gives a word and asks that it be written down. Apart from being displayed on-screen, it is also spoken. The word is then removed from the screen and must be typed in correctly using either the conventional keyboard or an on-screen version where the mouse is clicked over the appropriate letter. As each letter is entered, it is spoken. To aid comprehension, a sentence can be displayed showing the word in context.



Word Speed: is similar to Word Memory except each word must be entered against the clock.

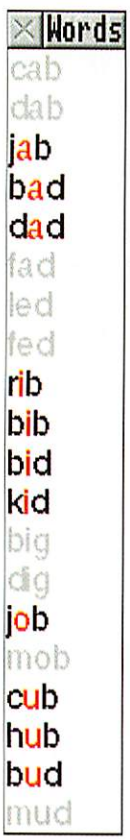
Word Splash: This is a more 'politically correct' version of Hangman where the computer thinks of a word and you must guess the correct letters to spell the word. Each time an incorrect letter is chosen, another part of a giant tub is drawn. After about a dozen incorrect guesses, a man is dumped into the tub.

Rocket: is a variation of Word Splash where after each correct letter guess, part of a rocket is drawn. Once all the letters have been correctly guessed, the word has been spelt and therefore the rocket is complete, it is launched.

Word Find: The final activity is a word search where you must find the words in the grid. To make the task a little more certain, a list of the words is provided and these are greyed out once each word has been found.

Conclusion

Several children can use Superspell and it keeps a record of each child's progress.



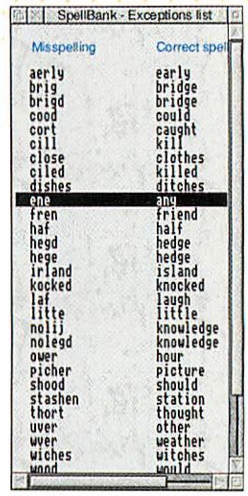
Diagnostic tests are included and instructions, including photocopiable worksheets, explain how to administer the tests. The software contains the now almost obligatory digitised voice which is used to good effect.

In fact the activities (especially Word Memory) would be considerably less useful if speech were not included. That said, I do wish the voice spoke with a little more enthusiasm.

At times it sounds distinctly bored with the whole affair. More importantly, when a word is incorrectly entered in Word Memory, it doesn't highlight the mistake, but merely tells you it is misspelt.

SuperSpell costs £29.95 for a single user and £59.90 for a site licence from 4Mation who may be contacted on (01271) 25353.

Spellbank by SEMERC



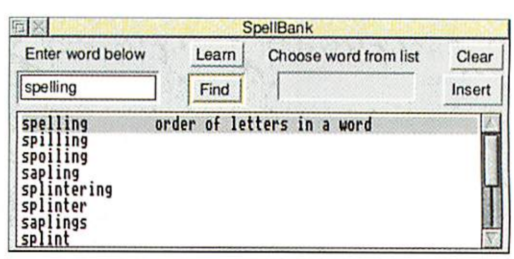
Spellbank is a totally different concept and more akin to a traditional spelling checker rather than spelling-based activities. Aimed mainly at Key Stage 2 and early Key Stage 3 it is intended to provide spelling help for children with the additional facility of spell checking files including text files created in *Edit*. Information about an individual's spelling progress can also be recorded.

When a pupil enters a spelling, Spellbank provides a list of close matches, in some cases with clues to their meaning. The chosen word can then be pasted into a word processor or DTP document without the need for re-typing.

Spellbank has a main dictionary of 16,000 words as well as the capability to use topic dictionaries created by the teacher and personalised user dictionaries for pupils. There is an option for the program to keep a record of the children's spellings which can then be searched (by the teacher) enabling the teacher to design differentiated spelling revision for each child.

Along with Spellbank is *Exceptions* – a program to 'tell' Spellbank about misspellings. For example, if a child continuously spells 'there' as 'thar', you may enter that spelling into Exceptions so that when a child enters 'thar', the computer will automatically look up 'there'. Words can be added to the list of exceptions and can also be removed.

Spellbank costs £25 for single user or £50 for a full site licence from SEMERC who may be contacted on 0161-627 4469.



Meeting the 

Steve Mumford reviews Network 23's latest release

You might remember a scrolling shoot-'em-up released many moons ago by a team named Network 23 – *Warlocks* was a fast-paced arcade romp through a shattered landscape, ending with an all-action showdown with the local ne'er-do-well sorcerer. The game displayed slick graphics and fast gameplay, and



although I'd have liked to have seen a little more depth, it showed a professionalism that was most promising.

Retro flavour

Network 23 have finally returned to the Acorn market to release their latest budget title, *Deadline*. It has a distinct 'retro' flavour – it's essentially a vertically-scrolling shoot-'em-up, putting you in control of a hardened commando as he fights his way through hordes of enemy soldiers in an attempt to release hostages held in distant command posts.

It takes its influences from various gung-ho arcade games from the past and it's not what you would call a game for pacifists. However, I don't think it would offend anyone's sensibilities.



The action is set over a number of different terrains, from desert plains and swamps to ruined cities, and each area presents its own hazards in the way of trenches or water – the abandoned city is a particularly tough level to crack as the walls provide excellent hiding places for the opposition. There are eight levels in all, and an additional secret mission is revealed when the game is completed. The difficulty level is about right, in that the first few stages are reasonably easy whereas the later ones take a fair while to master – with mines, grenade launchers and hidden snipers, the higher levels are certainly a challenge.

Graphics

Network 23's strong point is obviously graphics – Deadline's visuals are cartoon-like yet clear, and nice touches, such as the animation of palm trees as a helicopter passes overhead, add flavour. The speed of the animation is delightfully smooth, strengthening the 'arcade' feel of the game.

I would have liked to have seen a little more animation of the scenery, or some higher-octane graphical effects – still, I suppose we can't have everything. Sound is also a little disappointing and a bit abstract.



Admittedly, I'd prefer not to hear bloodcurdling screams every other second, but the explosions are a little lacklustre and the game would have benefited from some ambient sounds to build the atmosphere.

Control

Control is simple and involves guiding your commando forwards through enemy territory to reach the command post at the end of each level. Once there, shoot a few people and the hostages break free.

The gameplay takes place in one screen width, so you don't have much choice about the route taken – especially when the only path up the screen is a particularly thin, heavily guarded causeway.

As well as a standard semi-automatic, releasing two bullets for every tap of the fire key, your commando has a stash of grenades



which can be used to good effect, although for some reason he's only capable of throwing them vertically up and down the screen – perhaps throwing them diagonally was a skill inadvertently missed out of basic training.



Alone, then, he must toil through inhospitable landscapes until he reaches his goal. Luckily, crates of grenades and extra lives are lying around, and along with several restart points per level, they make the soldier's journey a smidgeon easier.

The control keys are redefinable and there's also a somewhat unusual password system – to jump to a higher level you need to gain access to the high score table to enter your 'name' – luckily, it's not a particularly hard feat to achieve and should present no problems. The game is touted to run at a silky-smooth 50 frames per second on all machines, and can be installed onto the hard drive should you have one.

It's good to see Network 23 again, and I'm pleased to say that I enjoyed playing their latest release – the simplicity of the gameplay is refreshing, and it's challenging enough to provide some bite. Admittedly, it could have benefited from more features and improved sound, but for the price, it's a bargain.

Product details

Product:	Deadline
Price:	£13.99 (inclusive of postage)
Supplier:	Network 23
Address:	73 Sylvan Avenue, East Cowes, Isle of Wight, PO32 6SJ
WWW:	http://www.geocities.com/Hollywood/2831/net23.html

Platform Statement

Graham Nelson takes a running jump

Who invented snakes and ladders? Surprisingly, it belongs to the 20th century. The name appears in a shop catalogue of 1907 ("An interesting and most exciting game of chance") and first surfaced in popular culture – one of Margery Allingham's *Campion* detective novels – in 1930. Toy manufacturers everywhere made rival versions,



with squares numbered 1 to 100, or 1 to 64. The original is lost, the inventor forgotten.

Today's parlour game plugs into a TV set and is called *platforms and ladders*. Actually, since you can't trademark a genre, the cartridges are usually named as a hedgehog with a punk-like shock of spines (Sonic) or else a family of Italian plumbers (Mario) with a pet dinosaur (Yoshi). These must be the most bizarre scenarios to come out of Japan since the later Godzilla movies, but nobody could doubt the idea. You play an athletic midget running and jumping past and over obstacles, avoiding monsters and collecting crystals. Or it may be diamonds, or dinosaur food.

The two big players, Sega and Nintendo, are as different as Pepsi and Coke. But looking through Internet vaults, I reckon that about a quarter of all 1980s computer games could be called *platforms and ladders*: the number alone makes some variety. I myself once wrote one called *Crystal Castle* (dreadful title) but, as with the Giant Rat of Sumatra, that remains a tale for which the world is not yet ready.

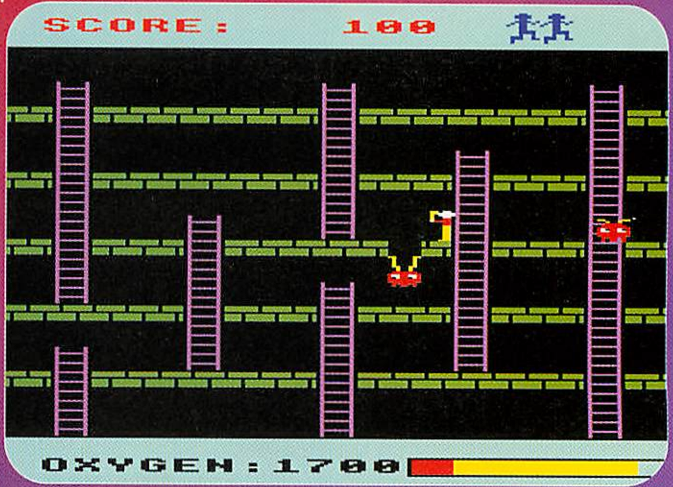
The idea was inevitable, in some ways; on a slow machine all games had to offer a 2D slice through a 3D world, and there aren't many ways to do this. The overhead shot is fine for moving tanks around on a battlefield map, but too much like a supermarket security video when it comes to people: tops of heads with foreshortened bodies. Diagonal views are hard to program, with problems of perspective, and that leaves the side-on shot. At once we have gravity, dragging the player toward the bottom fringe of the play area. Unless the player can gain and keep height, the screen will be 90 per cent empty: thus platforms, ladders, jumping.

For variety, there's a hoary old range of standard scenery: ropes, platforms that crumble when trodden on, conveyor belts and so on. More telling are the rules about jumps. Can the maximum height reached be increased by a long run-up? Can your trajectory be altered in mid-air, by frantically pressing the directional buttons? Impossible in real life, it's a vital technique in many modern games, and one way to increase the skill element.

Another key question is which way the world extends. Older games show one page at a time: for instance in *Monsters* (BBC Micro) or *Manic Miner* (ZX Spectrum). One way to extend this is to tile them together as "rooms", in the style of *Jet Set Willy* (Spectrum again). But arcade machines seldom offer branching choices of terrain: they want to hook the player into a long linear track of obstacles, building up both the player's addiction and ability. And so we have scrolling landscapes, promising that there is always something new over the next hill: not for nothing do the newest cartridges have titles like *Super Mario World*. Curiously, the hedgehog, plumber and so on, always runs left to right, perhaps following the way we read text. Maybe it would be reversed in Arabic countries.

The earliest scrolling land I know of is the endless city beneath the fighter-plane of the arcade machine *Scramble*. But home computers picked up the idea as soon as the technology could cope. The mid-1980s Commodore 64, armed with graphics hardware aimed directly at the games market, picked up a host of scrolling platformers. Among the best is *The Great Giana Sisters*, with a cartoonish look and feel you could mistake for the TV-game cartridges of today.

Yet it was written 10 years ago. So, have *platforms and ladders* been mined to exhaustion? As far as novelty goes, they surely have, and when I first thought about this piece I was going to end with a plea for new ideas. Unfortunately my arduous research left me hooked on *Giana* and I have to admit that everybody wants at least one platform game, just as every grandmother has a snakes and ladders board in the cupboard. Innovation is not the point.



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It contains 5 main sections on the disc each accessible from the Risc Disc front end which is a graphics based browser and searcher. The five sections are:-

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PD/Shareware files
Photo-CD images
Resources
Useful Text Files



RISC DISC 2
£7 + VAT = £8.23

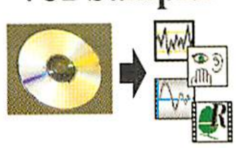
Following on from the success of The Risc Disc Volume One major features in Risc Disc 2 include even faster page display from CD and over 600MB of data.
Contents include PD/Shareware, Commercial Demos, Resources files including Artworks, AVI, MPEG, FLI, MIDI, Digital Symphony, Armadeus, Replay, Sprites, Drawfiles, JPEG, Electronic Books etc. A special section of info and resources for Clan members and finally a complete interactive Virtual World Wide Web.
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RISC DISC 3
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The PD / Shareware section has the latest software and includes over 30 Games, 35 Graphics programs and 28 Internet utilities, in fact over 400 programs in total. Essential utilities include ZAP and StrongED as well as a large number of graphics files and utilities suitable for creating your own Web pages.
A major feature is the full 1.2 Release of RiscBSD along with the latest StrongARM info and updates from Acorn.

!CDSampler



CDSampler
£7 + VAT = £8.23

CDSampler allows you to sample data directly from a standard audio CD in a similar way to reading data off a CDROM without the use of any audio digitising hardware.

It will transfer a whole track or any section from an audio CD to hard disc, saving it as raw data, a Microsoft WAVE file, an Acorn Replay file or an Armadeus file.

The data is always saved in the original form, as stereo 16 bit linear signed samples at 44.1kHz (176 Kbytes per second), except for Armadeus format where the data is mixed down to mono 8 bit linear signed. CDSampler also features CDPlayer controls to replace the normal Acorn CDPlayer.

!EMConvert
Convert Image Files to Acorn Replay Movies



EMConvert
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EMConvert is a utility to convert individual sprite / image files into ARMovie files, with optional scaling and cropping of the images. In this way sequences of sprites created from weather satellites or from ray-tracing packages for example may be joined together to produce a continuous movie, without the usual memory problems imposed by traditional animation playback systems.

The type of images recognised by the Dir and Text convertors is as follows.

FF9: Sprite (any format, old and new, 1-32 bpp), FFD: P13, FFD: P15, FFD: PPM, 690: Clear, 601: CCIR601 411: Irlam411

RiScript Pro
The Postscript Imaging Package



RiScript Pro
£77 + VAT = £90.48

RiScript Pro is a software package for the viewing of and browsing through PostScript and PDF files. RiScript is the core of the suite which produces Draw file output. ScripTerm is the 'interactive terminal' that can be attached to the interpreter. DSCript allows browsing through a document. PDFront interprets PDF (version 1.2), the portable document format, and allows for easy browsing through hypertext links and bookmarks in the document. Improvements in RiScript Pro over the PD version are: automatic font conversion for embedded Type 1 fonts to Acorn fonts, including multi-master fonts; loads of PostScript (de)compression filters; named resources; special and optimised printer driver output interpretation, however still compatible with Mac and PC output, and much more.

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From: Denis Howe <dhowe@linklaters.com>
Date: Mon, 02 Jun 1997 13:30:35 +0100
To: paul.NCS@paston.co.uk
Subject: Archive magazine

I just had to email you to say how excellent I think Archive is. I've known of it for years but only recently subscribed in response to the ad I received through the post.

I wish I'd subscribed ages ago, I guess I always imagined it was one of those sad little "This is *your* magazine, please send an article" fanzines, but now I discover it's stuffed with a wealth of authoritative, professionally presented articles, several of which were of immediate relevance to me.

Thanks and keep up the great work.

Denis Howe

The offer that Denis took up was: **£15 for 12 issues of Archive and a free copy of the Archive CD-ROM**. That offer is open to you as long as you've never subscribed before.

Send a cheque or credit card details to: Norwich Computer Services, 96a Vauxhall Street, Norwich, NR2 2SD. Phone 01603-765073, fax 764011, email <paul.NCS@paston.co.uk>

Adventures with Shuggy

Tony Houghton takes on the role of Shuggy, an elf with an important task

Shuggy is Werewolf Software's second game, and the first commercial product from the ARM'd & Dangerous programming team, who have already written a number of PD games. Shuggy takes us back to the era of all those great graphic adventures of the eighties, updating the genre with high-resolution 256-colour graphics and special effects. It's supplied on two 800K discs in the customary small video-style plastic case, with a neat A6 manual. The game can be installed to hard disc and is not copy protected at all – congratulations to Werewolf for their trusting attitude.



The graphics, although not up to the standard of a modern PC or console game, are an improvement on most old Acorn games, because they are designed for Mode 28, ie 256 colour VGA. You'll need a Risc PC with VRAM to play in this mode, older machines can't muster up enough screen memory for the two copies of the screen necessary to avoid flicker. Fortunately it can also run in Mode 15, which has about half the vertical resolution and is compatible with TV resolution monitors; the graphics don't look so good though.

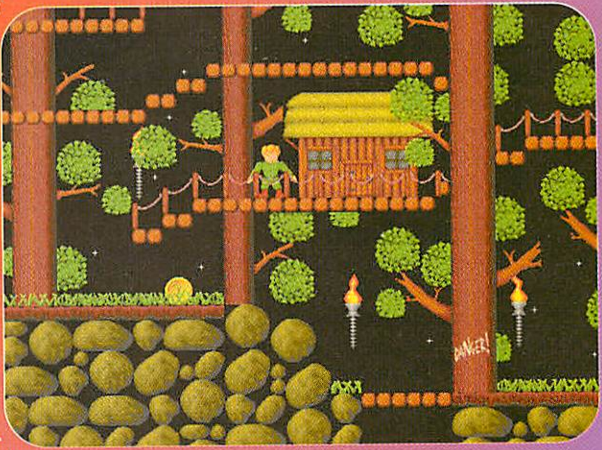
Playing the game

You play the part of Shuggy, a young elf. The controls are simple and can be redefined. The object of the adventure is to free a village from the grip of a despot, solving puzzles, helping people, and collecting coins along the way. The coins aren't just to make you rich, you'll need every one you can lay your hands on to complete your quest. Some of them are hidden in obscure places, including a secret passage. There are no monsters that can kill you, but there are a number of traps that are either fatal or otherwise make the game uncompletable.

The game is divided up into screens, each one having to be loaded from disc – very annoying if you have to run it from floppies – although only one swap seems to be necessary, a little intrusive on an Archimedes with a typical IDE hard drive, but hardly noticeable on a StrongARM Risc PC. I found I didn't need to make a map, rather a chore in the old days, because the screens are quite varied, and the landscape is rather flat and not very extensive.



The puzzles are all fairly logical, although some seem a little out of place in the scenario. A few hints are available for the more difficult puzzles. Two of the puzzles are a little unconventional because you can't collect your 'reward' until you've completed another unrelated puzzle. The graphics are accompanied by text, so there's none of that wondering what to do with the blue blob, and how to get past the red spiky thing that plagued some of the very old games of this type. A nice detail is that when talking to another character, each sentence stays on screen until a key is pressed, instead of forcing you to read at a laborious pace.



Special effects

There are a number of special effects in the game, including weather that both hinders and helps in your quest. Another lovely effect is the way the underground passages are dimly lit by Shuggy's flickering torch. There are a number of background tunes, which are at least good enough not to be annoying, but they do tend to drown out the sound effects.

I would recommend Shuggy to anyone who likes adventure games, but not without reservation. The game is rather small, especially for the price, and seasoned adventurers would probably find it too easy and complete it in a day. It is redeemed by the range and distribution of puzzles being very well suited to its size. Overall, it's a fine effort, and the producers deserve encouragement – I hope they continue to support the Acorn platform with bigger and better releases in the future.

Product details

Product:	Shuggy
Requirements:	RISC OS 3.10 and 2Mb
Supplier:	Werewolf Software 23 The Spinneys, Bromley, Kent, BR1 2NT
Tel:	0181-467 1138
Email:	info@werewlf.demon.co.uk
Web:	http://www.werewlf.demon.co.uk
Price:	£25.95 + £1.50 p&p

Pros: Well designed adventure • High-resolution screen mode • Special effects adding to gameplay

Cons: Old fashioned graphics • Character rather clumsy • Small and short to complete

Acorn Virtuality part 5

Greg Scott adds monsters to his arcade madness

This month we'll be adding even more features to the "!AU_Attack" engine and, most importantly, we'll see the introduction of objects to the world. Firstly, however, there have been a few less noticeable additions.

Incremental scaling

The 'bottleneck' of any graphics engine is the code which actually plots the pixels to the screen. In our case this is the function *ourlib_sliver()*. The efficiency of this function is so important that the speed of its operation restricts the activity of all the other processes in the rendering pipeline. If the sliver renderer is slow and incompetent, no matter how fast the ray-casting or screen-clearing code functions, the frame rate will still be brought down.

Currently the sliver renderer scales and plots each vertical column using a system known as the vertical error term. Basically this involves a loop of additions and comparisons of initial values to deduce which element in the graphics array should be plotted to each screen memory location.

However, there is a more simple way of drawing each column, involving far fewer additions and comparisons. This is known as incremental scaling, which we can now use in place of the old renderer. The (unoptimised) C source code for this process is explained below, though the actual version is coded in assembler:

```
 void new_sliver_renderer(int
screen_x,int scale,char
*screen_address,char *graphics)
 {
 int screen_y,screen_offset;
 float increment,index;

 screen_y=SCREEN_MIDDLE-(scale/2);
 /* we work out the starting y posi-
tion of the sliver */
 screen_offset=(screen_x+(screen_y*32
0);
 /* we then calculate the screen mem-
ory location to start from */
 increment=(float)TILE_HEIGHT/scale;
 /* this is the crucial part, we work
out a floating point increment to add
to the graphics index for each pixel
we plot */

 for(index=(float)0;scale>0;index+=in
crement,scale-)
 /* we establish the main loop now
when scale=0 we have finished */
 {
 /* now we use the floating point
index variable to choose the correct
pixel to plot. Note that we multiply
by 64 because the graphics are stored
in horizontal rows */


*(screen_address+screen_offset)=graph
ics[(int)index*64];

    /* now we move to the next pixel
in the column by adding 320 (the
screen width) to the offset in screen
memory */

    screen_offset+=320;
  }
  }
```

As you can see, the vital inner loop involves only a couple of instructions compared to the somewhat lengthy string of operations required for using the vertical error term. The division and multiplications can all be discarded through use of a look-up table and binary shifting respectively.

Objects

The last cosmetic addition we'll make to the engine this month is the inclusion of

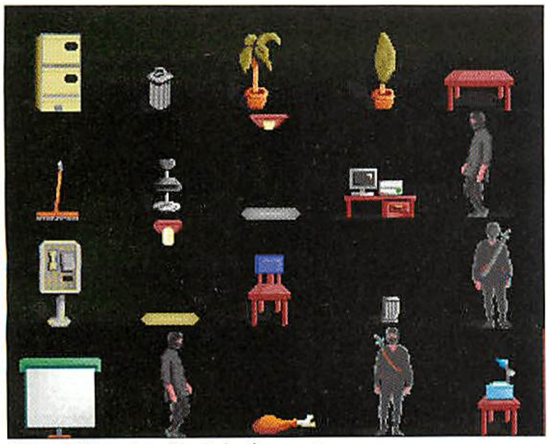


Figure I: The new objects in the game

```
000C00040000000
000000000000004
000000000000000
000C0C00C000C0
200000000000000
000000000000000
000200200000000
000000000000000
```

Figure II: How objects are represented

objects. The object handling code will come at the end of the central loop, inside the *main()* function.

Firstly, as with the walls, we need a suitable method of representing the objects in the world. Figures I and II, taken from this month's cover disc, are examples of all that is required. The system is almost identical to that of the walls — we use a single sprite file for the graphics and a numerical grid to describe the location and type of objects in the world. We shall store the graphics in a byte array called *objgraphics[]*. The object text file shall be stored in exactly the same way as the world file, in an two dimensional array called *objects[][]*.

To find any visible objects we pass through the *objects[][]* array, scanning the grid squares within a certain perimeter of the player:

```
for(grid_x=start_x;grid_x!=stop_x;gr
id_x+=move_x)
  {

for(grid_y=start_y;grid_y!=stop_y;gri
d_y+=move_y)
      {
       ...
```

Next, we test each element in the array to see if it contains an object (hence a non-zero value). If it doesn't we move to the next grid square:

```
if(!objects[grid_y][grid_x])con-
tinue;
```

If an object is visible then we must proceed to a further stage. Basically, we have to calculate where the object is relative to the viewer, then use this information to plot the object correctly onto the viewing plane (the screen). Firstly we calculate the fine co-ordinates of the object, such that both player and object are within the same co-ordinate system.

```
object_x=(grid_x<<6)+32; /* shift by
<<6 = * 64 */
object_y=(grid_y<<6)+32; /* these
lines centre the object in a grid
square */
```

Now that the co-ordinate system is common to both items in question, we can progress to the next stage. This requires us to rotate the object's co-ordinates around the viewpoint through an angle equal to the viewing angle of the player. The reason for performing this transformation is to align the object with the viewpoint relative to zero degrees (see Figure III).

Once this alignment is achieved it becomes possible to calculate where the object should appear inside the viewing plane. The code for the rotation is as follows:

```
/* rotate the object x coordinate
first, using slightly different
cosine and sine look up tables for
objects. It is all done in fixed
point. */

trans_x=((object_x-
view_x)*coso_table[view_angle]+(objec
t_y-
view_y)*sino_table[view_angle])>>16;

/* translate the object's y coordi-
nate (though to the viewer this is
the z coordinate because it only
moves in and out of the viewplane).
*/

trans_z=(-(object_x-
view_x)*sino_table[view_angle]+(objec
t_y-
view_y)*coso_table[view_angle])>>16;
```

The lines above perform the rotation required. Notice that before any multiplication takes place, we deduct the viewing coordinates from the respective object co-ordinates. This is to transform the object relative to the viewpoint — if we didn't, the object would be rotated around the origin of the world space and not the viewpoint.

After the rotation we can test to see if the object is in front of the viewpoint (and hence if it is visible). If it isn't, we move on to the next object.

```
if(trans_z<0)continue; /* object
must be in front of player */
```

At this stage we know that the object is somewhere in front of the player — we now have to work out where on the screen the object should appear, and at what scale it should be. To calculate the screen x co-ordinate we use the following equation:

```
/* SCREEN_CENTRE = 320/2 = 160.
VIEW_VAR can be thought of as the
distance of the human player's eyes
to the screen, 277 gives good
results, note that the reciprocal
look_up table is in fixed point */

screen_x=SCREEN_CENTRE +
((VIEW_VAR*trans_x *
recip_table[trans_z])>>16);
```

Finding the y screen co-ordinate involves calculating the offset of the top and bottom of the object from the vertical center of the screen (128 pixels). The offset from this origin is equal, so we only need to calculate it once:

```
/* We multiply VIEW_VAR by half of
the object height (32), then we
relate this "half-scale" to the dis-
tance by (in effect) dividing it by
trans_z */

offset=((VIEW_VAR*32) *
recip_table[trans_z])>>16;
```

Now we can calculate the starting and finishing screen co-ordinates of the object, as well as the scale of each column in the object:

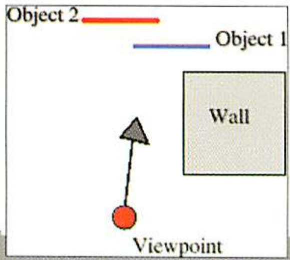
```
screen_y1=128-offset;
screen_y2=128+offset;
scale=screen_y2-screen_y1;
if(scale>SCREEN_HEIGHT)continue; /*
we skip object if scale is too large
*/
```

After the initial screen co-ordinates have been deduced we can proceed to plot the object using more conventional techniques. As with the walls, we split the object up into vertical columns and then proceed to draw each one using the *ourlib_sliver_mask()* function (which is also used to plot transparent walls).

The only other point to take into account is the question of which column

Acorn Virtuality

Figure V: Plotting the objects in the correct order



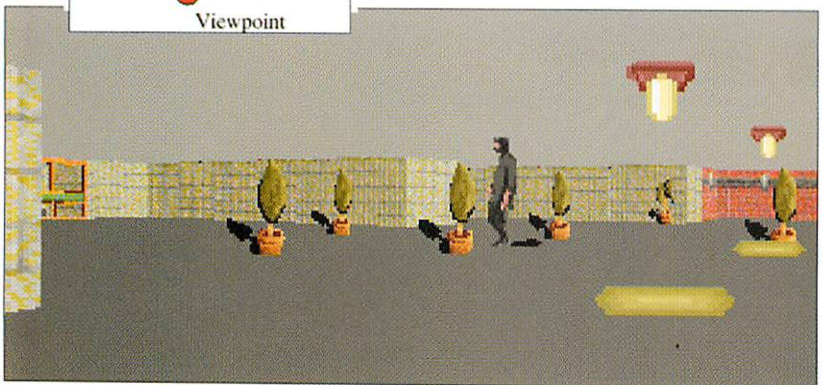


Figure IV: A screenshot taken from this month's engine

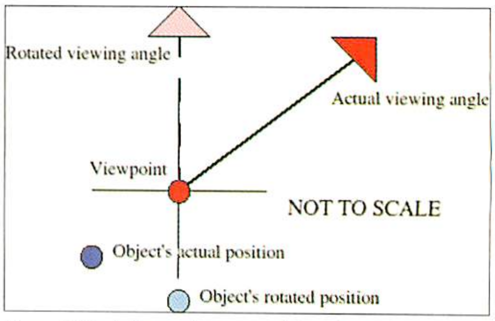


Figure III: Rotating points around the viewer

to draw — after all, the horizontal scale of the object isn't always going to be 64. The answer is in a technique already discussed this month: incremental scaling. But instead of applying this method in a vertical direction we shall use it to calculate which column of the object graphic should be drawn at each x position on the screen.

One important factor which hasn't been mentioned is the issue of objects being hidden both by walls and other objects. Figure V illustrates this point from a two dimensional perspective.

In this example Object 1 is partly obscured by the wall, and Object 2 (though not behind a wall) is blocked by Object 1. The latter problem is solved easily by the order in which we loop through the object grid squares. The other situation is slightly more awkward.

What is needed is an array the size of the screen width (320 pixels) which holds the scales of all the wall slivers drawn by the *aua_raycaster()* function. Then, when it comes to drawing each part of the object, all we need to do is test to see if the object scale is larger than the wall scale — if it is then we draw the object (since it must be in front of the wall), otherwise we don't draw a thing and proceed to the next column.

The code for these last few stages can be found on this month's cover disc, along with all the other additions from this month. Figure IV is a screenshot taken using the engine on the cover disc.

Demo mode

Another simple yet effective update we can make to the application is a demo mode — pre-recorded movements of the player which can be replayed to act as a demonstration or tour of the world. To record a demo to disc we need to store the player's co-ordinates and viewing angle for each frame. This can be done after the viewpoint moving code within the *main()* function:

```
datafile=fopen("demofile","w"); /*
open demo file */
...
/* record values for each frame */
if(DEMO_WRITE)fprintf(datafile,"%d
%d %d ",view_x,view_y,view_angle);
...
fclose(datafile); /* close demo file
*/
```

Playing back a recorded demo file is just as easy. Instead of using *fprintf()* we read in the values using the opposite function, *fscanf()*:

```
datafile=fopen("demofile","r"); /*
open file for reading */
...
if(DEMO_READ)
{
if((fscanf(datafile ,"%d %d %d
",&view_x,&view_y,&view_angle))=EOF)r
ewind(datafile); /* if the demo
reaches the end of the file, then go
back to the start */
}
...
fclose(datafile); /* close file */
```

It really is that simple. A worthwhile addition to this system would be to plot a graphic or text on the screen while the demo is playing.

More arguments

Last month saw the inclusion of command line arguments which were passed to the main() function to alter variables such as the screen window size and the player's co-ordinates. This month, because the engine developed such a great deal, we need to add to the already long list of parameters that we supply the engine with.

There are six new commands in all: <move>, <rotate>, <viewvar>, <viewvar2>, <demoflag> and <demoflag2>. The <move> and <rotate> arguments control the speed at which the viewpoint moves and rotates respectively.

This means that if you have a slow computer you can compensate by increasing the values – those lucky enough to have StrongARMs might want to lower them.

Please read the !Run file inside the "!AUAttack" directory for recommendations of all the command line arguments in use.

The two <viewvar> variables are used by the object plotter covered earlier — once more please read the comments on the cover disc for more information. The <demoflag> and <demoflag2> variables give the following effects

<demoflag>	<demoflag2>	Result
0	0	Demo not written or read
1	0	Demo read
0	1	Demo written

Examples of different setups can also be found inside the !Run file. I recommend spending some time tweaking the values to attain the best results for your own computer.

In the final article next month we'll be tying up the loose ends of AUAttack. There'll be moving baddies, guns, sounds and options, plus a couple of things I think I'll keep quiet about for now...

Rambles through Acorn Wood

Mike Cook helps to sort out your problems

It's amazing how quickly you forget. The other day I had to drag out my old model B to copy some discs. I plugged it in, switched it on, a double beep and it was ready – just like that. No booting, system installation, patch loading, predesk tasks, font loading or initialisation. And when it was time to switch it off I did just that. How life with computers has changed.

I had a really great time at the Wakefield show, meeting new readers and old friends alike. However, what was really neat was that it gave me an excuse to buy a new MIDI sound module to put on the sound square I was showing off again. I didn't have access to the one I used before so I got a new MU10 and the sounds are really amazing.

However, I could change the sounds from the old module by pressing buttons on it – the MU10 has no buttons at all and relies on software. Therefore, I had to write some software just to change the voices. In case any of you find it useful I have put it on this month's cover disc. It will work with any General MIDI sound box and at 128 items must have one of the longest menus of any RISC OS application.

Normally there's a quick way and a slow way of getting answers. Unfortunately asking me through this column is not the quickest way in the world to get a reply. Your first port of call should always be the supplier of the problem item. A case in point here is the problem that Mr Clark had in the June issue concerning his CD-ROM drive.

Mark Gilman from Cumana customer services sent me this letter:

The problems Mr Clark describes with not being able to set up the screen correctly are also tied to our !BootIDECD application, which clashes with Acorn's Configuration utility on recent versions of RISC OS. It is easily remedied however. The best way to set up one of Cumana's double-speed Indigo drives is as follows:

1) Remove the !BootIDECD application from the . . . PreDesk directory. Most of it is not needed
2) Copy the module islcd_2 from inside the !BootIDECD application back into PreDesk. This is the CDFS softload driver for our CD-ROM drive, and is the only part of the original application that is needed on RISC OS 3.6 or later
3) Press F12, and type *Unplug CDFSSoftATAPI. If you don't do this, you will get all sorts of apparent (but not real!) disc errors on the main IDE HD. This is what caused Mr Clark's "Floppy Boot" problem
4) Reboot the computer, then run the !Boot application
5) Choose the "Discs..." option and set the number of CD-ROM drives to one

This should leave Mr Clark with a CD-ROM drive that works fine under RISC OS 3.6 or RISC OS 3.7. We do have a small 'application' which will automate the process – this is available from us free of charge.

Phil Hughes, a producer for BBC Radio 2, e-mailed me with a few points:

I have an A400 Arc, can it be made to work with an HP Laserjet III printer? There are drivers on the Acorn 1.53 release as far as I can tell but is my printer port suitable?

I seem to remember years ago that you had to buy a 'Direct Drive' laser printer. Is that still the case?

When you make a laser printer there are two parts, the bit that does the printing called the engine, and the controller board which contains a microcomputer. Although there are many laser printers about there are very few people who actually make the engine. Most laser printer manufacturers simply buy in the engines and add their own controller board.

To reduce costs you could fit a very rudimentary controller board and do most of the processing on the host computer – that's what a 'Direct Drive' laser printer was about.
With falling prices this option is not so attractive so most printers sold have a decent controller. The HP Laserjet III printer is no exception so you don't need any direct drive software, only the normal printer driver that acts as a software interface between the application and printer.

These are primarily designed for the PC market and as such will almost certainly be usable with your older machine. The only difference between the newer printer ports and yours is that the newer ones are bi-directional but as the printer does not want to talk to the computer it does not matter.

He continues with a supplemental:

I have the Internet on my PC at work but not on my Arc at home. Having accessed the HENSA site I have downloaded some utilities onto floppies on the PC. Taking them home they come up as DOS files and I need to change the file types. But what to?

Font and text files are fine. I have tried to download *SparkPlug* and a cassette label printing utility but don't know what these should be changed to – how do they then become !Application files that will install on the Icon bar in the usual way? Obviously I have to make Sparkplug work first as they are all compressed.

All you need to do here is to set the file type to text. Then drag the file onto the Sparkplug icon on the icon bar. Sparkplug will then change the file type to Archive. You will then be able to extract the application and copy it onto disc before running it. If you are downloading Spark from the net as a uuencoded file, you'll have to extract it using UUDecode – see the "tools_help" file in arch/riscos/tools for further information.

Michael Marshall has stumbled across a little hidden gem. He writes:

For some unexplained reason I was messing around on the CLI and found a strange oddity. I was leaning on the keyboard and accidentally leant on the hash (#) key then return. From a command of ### I got some stuff about arp. Intrigued, I typed #### and got some rubbish on ping, 5#'s got route, 9 got font merge and 10 trace route. Why? I know these are (mainly) files from inside the !internet program in !Boot. I couldn't find anything in the manual to suggest that pressing # should do anything – in fact I though it was an illegal character.

I was intrigued by this and tested it out and found it only happened on certain models with certain modules loaded. Most of the messages are from the network system and I found that if the network software was installed in a machine that was not connected to a network this would happen.

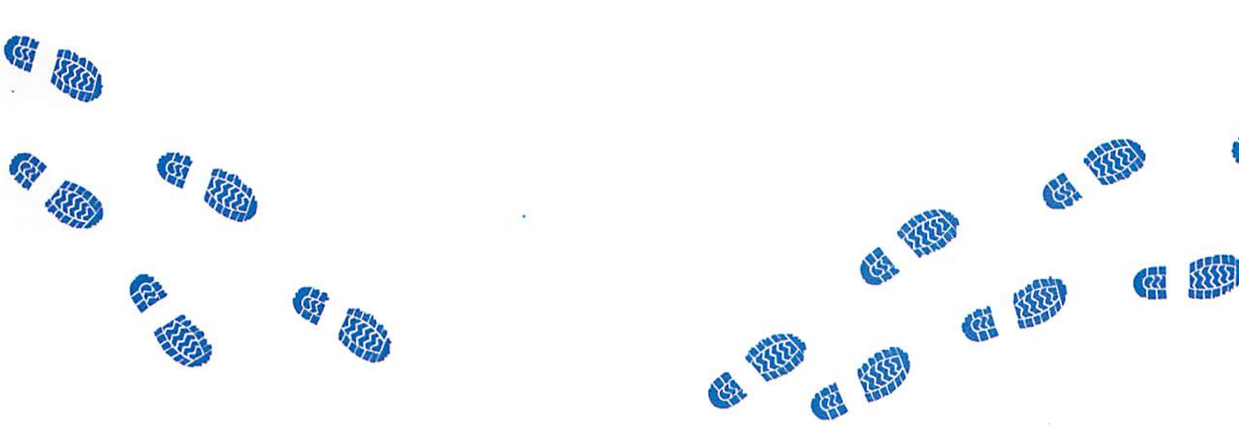
It did not occur on the same type of machine connected to a network. At Wakefield I took the opportunity to show this to some of the technical wizards on the Acorn stand and they, too, were amazed it was happening. The consensus appears to be something along the lines of this: as # is a wild card character, something in the command line interpreter's parser must be triggering off the commands.

Glenn Burgess is having a problem with his printer:

My BJ130 printer has spent the last two years pretending to be an Epson. It runs okay-ish under the FX80 printer driver, but takes 15 minutes to produce one side of A4 from *Impression Junior*. And that's on 270x270 dpi (or thereabouts) and not the 360x360 of which it is capable (which I can't get under the FX80 drivers).

So, damn and blast it, I want it to behave like a proper BJ130, in that it should take something less than 15 minutes per sheet, and produce better output.

Why, you may ask, don't I use the Canon drivers? Well, because I can't get them to work. Most of the time, the printer just shoves the paper back out line by line without printing anything. The manual makes about as much sense as a fish that can't swim. So, can you help?
Well no not directly. You see the problem I have is



that I don't have your printer and the problem you have is that you do. Another thing you must remember is that manuals are written only for people who know all the information anyway. What is probably happening is that you have some of the jumper links on the printer set incorrectly. However, if anyone out there really knows what the matter is or has this sort of printer could you please write in and share your knowledge with the world.

Readers often have the answers to the most obscure of problems like Jeffrey Doggett from Thurnby. He offers this advice:

When I bought my Risc PC 700, I encountered the same problems with *Birds of War* as Mr Rolfe. I got exactly the same abort error. After many hours of debugging the 'load_packedscreen' function, I eventually discovered that the problem was in an interrupt routine – since loading a packed screen can take a long time in CPU terms it is inevitable that the function will get interrupted many times.

The culprit was eventually determined to be the sound player module. I solved my problem by replacing the sound player with a later version. Once the game loaded I switched the music off. I'm not really sure why Mr Rolfe's machine has suddenly started exhibiting this problem or why *Impression* has failed at the same time.

Next up an e-mail from Lee-Roy McLean in South Africa:

I have an A340, and am studying Electrical Engineering at the Port Elizabeth Technikon. My father has built your I^2C I/O bus card and is having difficulties in reading in frequencies over about 50Hz with accuracy. He is wanting to built a REV counter and wants about 100Hz as maximum (50Hz is equal to 3000 rpm). He wondered if you could help or had data sheets on the two ICs.

He also has difficulty with the SYS commands, he does not have any information on the commands and therefore doesn't know how to get the best results from I^2C bus. I found a program on the Internet called *IICalarm* and that had a lot of help file on the bus and the relevant commands, but it is all in German and I can't read it.

The I^2C alarm project is an interesting one. It uses the alarm function on the built-in real time clock to allow the computer to switch on automatically at a predetermined time. It requires a bit of poking around the innards of the computer and making use of a spare output bit found in most models. While most of it is in English there is a bit on the bus in German.

If you want data sheets on these devices, the simplest way is to get them on the net. The Farnell Electronics Web site has lots available. The ones you are after can be found at: http://www.farnell.co.uk/datasheets/42973001.pdf – this is for the PCF8591 which is the A/D and D/A chip and all the same but /42964001.pdf for the 8 bit input/output chip. These are in *Acrobat* format – readers are available on the net. However, this contains a lot of information you don't really use under RISC OS. This is on page 944 of volume 1 of the Programmers Reference manual.

There is only one command for accessing the bus under RISC OS. However, it's quite simple: SWI &240 or SYS'IIC_Control' takes in three numbers. The first is the device address with bit 0 = 0 to write or 1 to read the device.

The second number points to a block of memory to be sent to the device or to be filled in by the device, and the final number is the length of the block or how many bytes to read or write. My original article did have four simple Basic routines for reading/writing each of the chips. As for your specific problem I did put a module on last month's cover disc to speed up the bus but I suspect that your machine is not fast enough for the task especially if you are using BASIC.

You need to read the input signal at a very high rate if you are going to get any accuracy at all. One way to tackle this is to feed the pulses into a monostable and take the output pulse train through a diode and smoothing capacitor. This is effectively a frequency to voltage converter. Then all you need to do is to feed this voltage into the A/D input of the PCF8591. Alternatively instead of timing one cycle, count how long it takes to see say 100 cycles. The more cycles you count, the more accurate will be your answer, but the longer it will take.

Remember Ian Entwistle? A few months ago he hit the magic 28Mb limit on application on the Risc PC. He has been digging about and has now reported:

I have finally this week achieved my goal of writing an image file greater than 28Mb. I managed a demo file of 64Mb (94096x4096 24 bit) with only 64Mb RAM. Not something you can do on a Mac or PC. The ever helpful David Pilling pointed me in the right direction. His *!Imagemaster* application which I use a great deal is one of the few applications that can handle such big files.

All the mainline programs were written to run with application memory before dynamic RAM was catered for. Even *Photodesk* cannot exceed 8000x8000 pixels. The other problem I wasn't able to resolve as my copy of *MovieFS* was the latest and the author said it was the fault of the film file. It runs OK on a PC and other files above 28Mb act similarly so I guess there is a bug somewhere. Your encouraging reply was responsible for my enthusiasm to spend a lot more time on the problem. My faith in the RISC OS platform has been redeemed for now.

Good, but you are wrong on one point. You can handle an image that size on a Mac and with only 16Mb of RAM. *Photoshop* uses its own internal virtual memory system. As to your MovieFS problem, I suspect that your files are using a compression system that is not implemented. I have viewed many movies over 28Mb without any problem.

George Begbie from Tasmania is wanting to upgrade his computer. He writes:

I would like to ask you a few questions concerning my A3000 and hardware capabilities. I was looking through some advertisements in an *Acorn Computing* magazine, and I found one about *Ultimate MultiPodule* system which would give your computer extra expansion space. For the A3000, it would give you three expansion slots, a user port, and hard disc space. I believe that the devices must be IDE or could they also be SCSI?

SCSI hard drives can be somewhat cheaper than IDE ones. I was also thinking of connecting a CD-ROM drive to my computer. SCSI ones are the most common advertised, but then again, if the Ultimate card does not accept SCSI, IDE would be the one to go for. And does the Ultimate card include an IDE interface? Also, there might be another solution as far as expansion cards go. There was another one advertised a while ago from Greyhound Marketing, or maybe, I wouldn't need any of these cards at all?

I think you are getting a bit mixed up here. IDE is a bus system used for hard discs and CD drives. With SCSI you can use these and other things like scanners and removable drives. As it stands you can't fit either into your computer. What you need is an interface podule to implement an IDE or SCSI interface.

Forget Greyhound – they went out of business some time ago and as the A3000 is an quite old computer it looks like the Ultimate card is your only choice, although there might be some other cards about I have not heard of. Get it along with a disc drive and then you will know that they are compatible. There are a lot of very shady IDE drives out there in PC land. It surprises me that you say that SCSI is cheaper over there. It's certainly not the case over here. AU

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Landscape gourauding

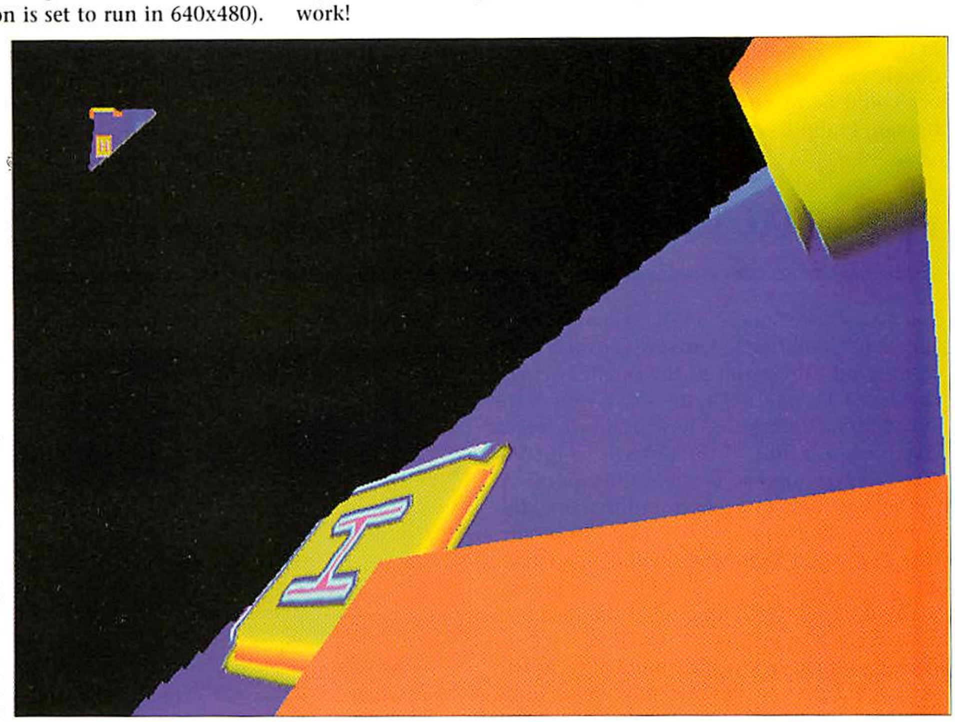
Author: Jan Vlietinck

Earlier this year we received a pile of submissions from our good friend **Jan Vlietinck**, as always both the wild and the wacky were covered. However, one particular pair of programs *Gouraud* and *GouraudHi* just seemed a little 'samey', both plotting a heap of multi-coloured triangles and demonstrating the work of our old acquaintance Mr Gouraud (the *Hi* version is set to run in 640x480). As they stood they were OK, but we thought Jan was up to better so we wrote and asked if he could do something more interesting with the triangles rather than just telling everyone that he can plot 1,000 a second (on a StrongARM).

About a week later *Flyng* and *FlyngHi* arrived – perhaps we should send back all our submissions and ask the authors to try again! Jan has transformed his 1,000 triangles a second into a flying-over-the-landscape demo. Admittedly the colours are all a little bright but do illustrate the gourauding.

Your view point can be altered using the mouse – use left and right to turn and forward and backward to speed up and slow down. In addition, Select pitches forward, Adjust pitches back, Menu climbs (gain altitude) and Select+Adjust dives (lose altitude). If this wasn't enough, you can perform z-axis rotation with Menu+Select to roll left and Menu+Adjust to roll right. Not the most obvious set of controls – but has anyone tried playing *Tomb Raider* or *Descent* recently?

Many of you will have seen Jan's impressive texture-mapped, light-sourced balloon, dragon and skull on the StrongARM disc and anyone with an Internet connection may well have downloaded a copy of his *Quake* plotter. Let's hope he keeps up all this excellent work!



Channel 5 **Author: James Andrews**

Here are two programs from **James Andrews** which uncannily seem to simulate Channel 5 picture reception, (well in our house at least.) *Sniggle* is a very cunning one-line program and uses a feature of BASIC that we haven't seen before.

'This is a program based on an effect which suddenly occurred to me one day. By using the command:

```
$(base+n)="xxxxxxxxxxxxxxx"
```

it is possible to fill the screen quickly in whatever colour you want, even in BASIC. So that is what this program does. It creates a string of random characters (and random length), then fills the screen with it.

'Two variables can be changed, depending on the speed of your computer; they are at the very beginning of the program – m% and t%. m% determines the mode used. For a fast computer, choose a high resolution mode such as 20, 21 or 28. For a slower computer, try a lower resolution – 9, 13 or 0. The program automatically works out the size of the screen in pixels and also doesn't mind how many colours the mode uses. t% determines the possible lengths of the string. Again, change it to suit the speed of your computer. For a fast computer, try a low value (minimum: 0) and for a slow one try a larger value (maximum: 255).



James' second prog, *TVFuzz* produces a "colourful, fuzzy display which looks nothing like a TV". Hmmm, we wonder what's on BBC 2...

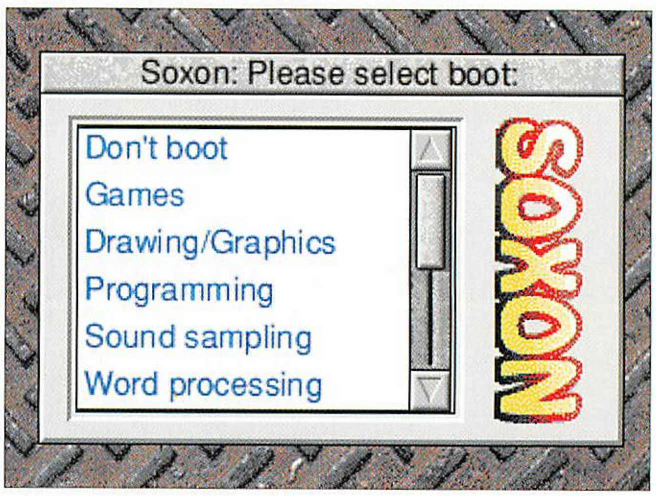
Boot.choices.boot **Author: Philip Mellor**

If you use a computer for a variety of tasks but are rather short on the DRAM, **Philip Mellor's** *Soxon* may well be able to help. It lets you set up a number of different boot sequences and then provides a menu on startup from which you can pick the optimal machine configuration.

Philip recommends you keep only a minimal boot sequence, loading your backdrop and icons etc. and then run up Soxon. From here you would only boot up the tools and application needed.

To set up your own boot files have a look inside the *Files* directory inside the main Soxon application. There are a number of example files here which are unlikely to be of immediate use as they are set up for Philip's working environment. You can delete or modify them as required. The files in this directory are *Filer_Run'ed when you double click on their names and so in theory could be of any file type. In practice though, Philip has reserved the first line of the file (after the leading | character which marks the line as a comment) to be the name of the file which appears in the Soxon window. This means you should really stick to Obey or Desktop files. Apart from this one caveat, you are free to put any commands in the rest of the file.

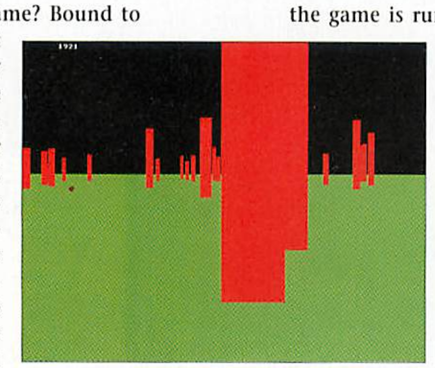
Soxon always adds an option 'Don't Boot' to the top of the list of options available. Double-clicking this quits the program without running any further boot sequence.



Philip does explain why the program is called Soxon, but it is so corny we can't bring ourselves to relay the reasoning. If you are really desperate to find out, it's on line 75 of the !Help file.

A view with no room **Author: Andrew Clover**

You know us – Small? BASIC? Game? *Old* game? Bound to appear in *info! Here's **Andrew Clover's** latest offering into the realm of the small. Lovingly christened *1kgame*, it's Andrew's version of the 8-bit classic *Deathchase* – how could we forget. It also has a feeling of the tower level on Star Wars – where you had to shoot the tops off. As you may be able to guess from the name, this game is only 1K long (1,022 bytes to be precise, so all you ZX81 owners will have to make sure your RAM pack isn't wobbling too much).



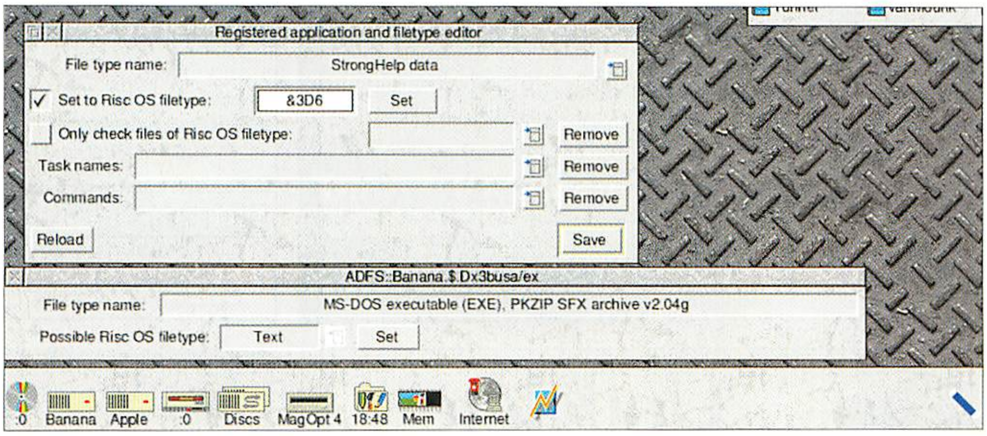
The keys are Z, X, / and ' and the idea is to score as many points as possible without crashing into a, er, tree. The more diligent will notice that it is possible to move right through trees when the game is running slowly. This is, of course, a deliberate feature and has nothing whatsoever to do with the simplistic collision detection.

Andrew has supplied two versions: the standard 1k game runs in Mode 19, whereas 1k game1 runs in Mode 1. It has a smaller depth of field and should run a lot faster on slower processors.

You may think you can cheat by just going forwards and backwards, but new trees do appear and it is quite easy suddenly to reverse into one without realising and lose. You should be able to score a couple of thousand without trying. The *info high-score is 7,000 and Andrew's personal best in 29,006!

It's a kind of magic

Author: Alex Hayward



Magic is an extensible file identifier and interceptor – it can examine untyped files and guess what they are. It can also re-direct files to applications by double clicking on them. We have covered this sort of thing before, but **Alex Hayward's** program uses a database of file types derived from the NetBSD/etc/magic file and as such is almost standard across many platforms. Alex has augmented the syntax a little and added a large handful of RISC OS file types but many of the common formats have been left untouched.

'Magic uses a similar system and a similar file format to the unix 'file' command, but it has extended the file's format in various ways – see the 'MagicForm' file for details. This means that rather than being limited to a few hard coded file formats, Magic can be extended to detect files of many types. A default magic file is supplied to detect many types encountered in RISC OS and elsewhere.

'Once Magic is loaded you can attempt to identify a file by dragging it to its icon bar icon. If this is successful a window will open which contains a description of the file type enabling you to set its RISC OS filetype to one of those set in the main editing window (see below).

'The 'Set to RISC OS filetype' option, if turned on, enables you to specify a file type (either a textual name such as 'Text' or hex value such as 'fff') to which Magic will set any files of that type when they are double clicked. Setting the 'Only check files of RISC OS filetype' enables you to create a list of filetypes which should be checked to see if they are of the textual type displayed at the top of the window. To add an entry use the writable entry in the adjacent pop-up menu, and to delete one select it in the menu and click on 'Remove'.

'In a similar way the names of tasks and commands can be added to this textual file type. Note that task names must be typed *exactly* the same way as they are shown in the Task Manager.

'When a file of this type is double clicked, Magic first checks to see if any of the named tasks are loaded. If one is found the file is sent directly to it. If no tasks are found Magic will attempt to run each command listed in order until one succeeds. If this fails things carry on as if Magic was not loaded (after setting the file type, if this option was enabled). Holding down Shift will only set the type of the file and not attempt to run any commands or send it to any tasks – this is so you can load the file into a text editor. Holding down control will prevent Magic from doing anything at all.

'Commands are typically of the form <App$Dir>.!Run %s where App is the name of the program, which must have been seen by the filer for the command to run successfully.

'Changes normally take immediate effect but will not be permanent until you click on Save. The Reload button should be used if you wish to discard any changes and revert to the original saved file, and should also be used if you edit the magic file directly'.

Poodle doodle

Author: Axel

Well, actually there aren't too many of those stupid looking pooches involved with this demo. The reasons for the name *Poodle* are historic, or silly in other words.

The idea is a watery one. You know how it is. You take your favourite oil painting out into the yard to show the neighbours and accidentally drop it into the kids' paddling pool. Before you know it, it's started raining. Poodle is a frighteningly realistic emulation of this commonplace scenario.



How does it work?

The program is based on a PC doodle and involves two main stages. Each pixel of the 320 x 256 has a 'displacement' associated with it. In fact, it has two – one in each of two buffers. This displacement is a 32-bit number and represents how disturbed the water is at that point. Pixels are copied from the original picture to the screen, taking into account the displacements. Although the effect is only applied horizontally, this isn't apparent and you probably wouldn't have noticed if we hadn't told you. (Would you?)

The displacements are processed as follows.

It's basically one of those look up, down, left and right manoeuvres. The displacements of the four neighbours are added together and the total is divided by 2. This value is then subtracted from the displacement of the current pixel and, so that the waves die down, one 32nd of the amount is subtracted. If you would like your waves to die down more quickly, change the ASR #5 to #4 instead.

So that the process doesn't go too slowly on non-StrongArm machines, some optimisation had been used.

For each pixel, we have to look at the displacements left and right. In fact, we just load three displacements in a row, and then shuffle the registers so that we only have to do one LDR instead of two.

Poking bytes is less efficient than poking words, so we build up a word containing four pixels and plot then with a single STR. This will make no difference on a StrongArm of course, and will probably go slightly slower in fact!

The effect seems to work best with a familiar picture underneath, but if you choose not to load the picture at the start, a simple bar pattern will be used. Note that the bars are vertical – rippling would have no effect on horizontal ones!

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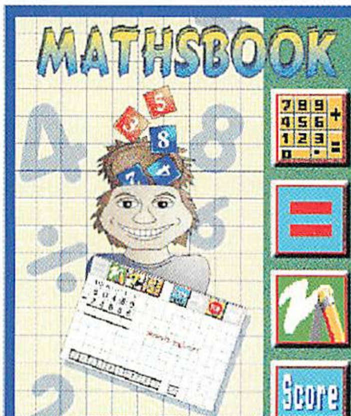
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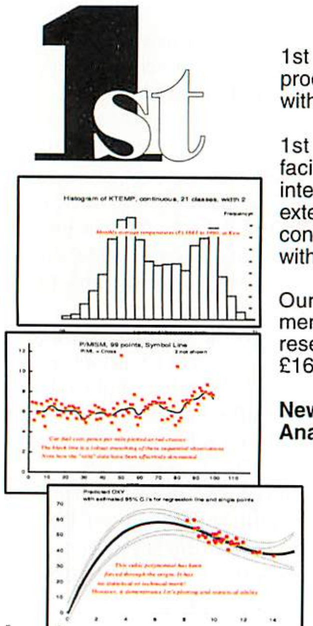
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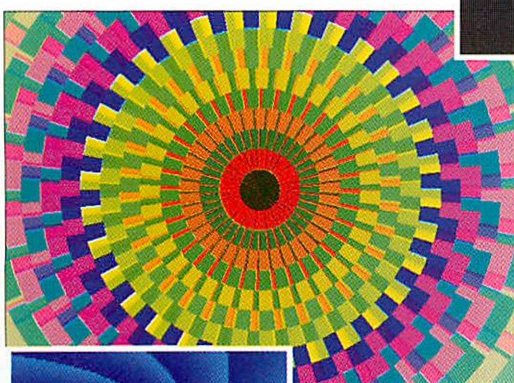
Tunnel time

And so to the moment you've all been waiting for – the results of our latest challenge. If you remember, the brief, way back in May, was to write a tunnel-like demo. The votes from the Norwegian jury are now in, and the winners can be made known.

First off, some honourable mentions. **Richard Wareham** of St Ives sent in a couple of excellent demos, including one Dr Who-like plasma affair complete with Tardis.



By Scott Boham





By Mark Adcock

Aside from copyright problems, lack of disc space prevents us from carrying it in all its 430K of glory.

Richard's other entry, also rather too large to carry I'm afraid, featured real-time mapping of text messages onto the tunnel walls and depth-cueing. As you might imagine, a StrongArm was something of a necessity to get the most out of these demos.

We had a number of BASIC entries which invariably used palette switching to achieve their effects. *info regular **Mark Adcock** provided a series of programs, one of which – *Funnel4* – we have included. This is not a tunnel exactly, but is in the same ballpark and the effect is rather nice. Also from Mark comes *PlugHole* – again, not a tunnel as we know and love them, but interesting all the same.

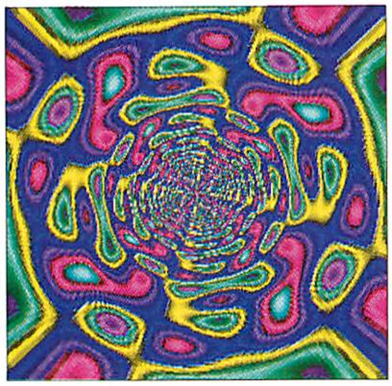
A machine-code demo from **Ray Taylor** also gets an honourable mention and is one of those "sliding down a heating-duct" demos. It goes at six frames a second on Ray's A5000, and rather more on Risc PCs.

Scott Boham – another name not unheard of in these parts entered a tunnel viewed from outside (which even we're not sure counts) and a plasma type number, which you will find on the disc. Again, this isn't a tunnel exactly and you don't get too much of an impression of flying into the maelstrom, but the program is trying to generate some decent plasma which emanates from the centre of the screen and is therefore a noble attempt.

Runner-up in the challenge is **Rob Jeffs**. He cheekily used an *AU* motif to try and boost his chances, and being the suckers we are for a good motif, the ploy worked. A 64 x 64 sprite (which is designed to tessellate well) is simply mapped onto a cylinder. This is done using a table – a time-saver used by several entrants. No depth-cueing is used, but you can control movement with the mouse. Progress down the tunnel is sedate and none too frightening, but the code is efficient and the animation smooth. Well done to Rob for another successful challenge entry.

The winner though is **Thomas Madams**. He combines the sort of mapping employed by Rob with a bit of plasma generation and the result is fast and, well, very tunnel-like.

Upon running, select the spacing of the grid used to create the plasma. The grid size works on an exponential scale as the points are 2^n apart. Thomas suggests 4 or 5 give the best results, but try all possibilities since the effects are diverse.



The winner by Thomas Madams

The obligatory lookup table is then generated. This will take a few seconds. When complete, your plasma square is displayed. Move the mouse left and right to alter the palette, or generate a new lump of plasma altogether by pressing the left button. When the plasma suits, click with the right button and sit back and enjoy the ride.



Runner-up by Rob Jeffs

Thomas describes how his entry works:

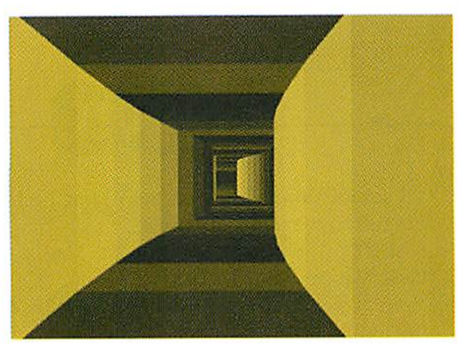
'The lookup table itself is a 256 x 256 array of words that contain the offset from the start of the sprite for each pixel. A piece of ARM code just reads this value and plots the colour at this point of the sprite onto the screen.

'Imagine that instead of 360 degrees in a circle, there were only 256 degrees. This means there would be 64 degrees in each quarter of a circle. Now the program calculates the angle tended to the centre of the screen by each pixel on the screen in these units. It then works out a% MOD 64 where *a%* is the angle. If this is used as the y co-ordinate of the sprite and stored in the lookup table, the sprite can be mapped onto a tunnel.

'The x co-ordinate of the sprite is found by working out cos(a%)/x% where *x%* is the x co-ordinate of the current pixel on the screen. Due to the symmetrical nature of the tunnel, the program only needs to calculate the look-up table for a quarter of the screen.

'PROCplasma generates the plasma field in an unusual (and processor intensive) way. If you plot some random points on a graph and join them up by hand, to give a smooth curve then what you have drawn can probably be represented with a mathematical curve. A spline curve does just that job by drawing a separate cubic graph between every set of two points. The maths behind this is too complex to go into here but is explained in *The New Turing Omnibus* by AK Dewdney which contains loads of good programming ideas.

'PROCplot takes the lookup table, loads each word in turn from it and then finds the colour of the pixel in the sprite that corresponds to the offset from the start of the sprite defined by this word. It then plots this colour onto the screen, building up the image as it goes.



By Ray Taylor

'But how does the tunnel move? This is actually done by cheating a little bit. It is not the tunnel that moves, it is the sprite. By rotating the sprite upwards by a pixel per frame, the illusion of spinning around is generated. Rotating the sprite sideways by four pixels per frame, it gives the appearance that you are travelling through the tunnel.'

Spooky challenge

And so to your next challenge. Your task is simply to write the spookiest program you can. The successful entrants will have their programs featured in the November issue, shortly before Halloween. (Well, yes, I know Halloween is in October, but we magazine folk are always ahead of ourselves.)

Your brief is once again very open, so imaginations can run riot. While 'spooky' is best, 'creepy' programs stand a good chance of winning, although 'unpleasant' and 'disgusting' ones less so, since we have just about exhausted those avenues anyway. Spooky sound effects will probably go down well (and of course, there is no reason why your program should not be sound only, if sufficiently ghoulish). The only restriction on your entry is that any one program (and associated files) **must not be more than 100K**. You may of course send as many entries as you like.

The deadline is Friday 15th August 1997. Send your entry to *info at the usual address and please mark your envelope and disc with *Spooky Challenge*. Please include the standard text file with your name, address, e-mail address etc, as well as details of your entry. You may e-mail your entry – see *quit for details. The judges' decision is final.

Fluff and nonsense

Author: Mark Adcock



To fluffy programs, and some lightning now from **Mark Adcock**. *Fluff1* is 'a random walk pattern where the colour of the point plotted is one shade lighter than the one below it.' The result looks a little like what you might find under your bed if you don't hoover enough. *Fluff2* uses the same algorithm as the original, but generates several pieces of fluff, using POINT to check that they don't overlap.



On a not entirely different note, *Blulitenin* selects a random palette – generally a bluey one – and a wiggly, random line is drawn. This stops after a while, or when it hits an existing line, and a shading procedure not dissimilar to that used by *Fluff1* is applied.

How long is a piece of string?

Author: Jean Van Mourik



The ghost of StringThing is alive and well (still!) and living in darkest Dyfed, inside the Risc PC of **Jean Van Mourik.** *Dangle* simulates a dangling chain of multi spheres connected to the mouse (isn't computer speak wonderful these days!). Waggle the mouse around and pretend you're, er, dangling a chain of multi-coloured spheres.



*QUIT

All submissions, large, or small, but preferably small, and not too large really please, to:

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or, if your submission is about **100K or less**, e-mail us (including your real address please) at:

austarinfo@idg.co.uk

You needn't include a letter but **please put your name, address and program title on every disc** and include a text file containing your name, address, disc contents and program details.

If you are responding to one of our challenges, please mark your envelope clearly with the name of the challenge. An SAE will ensure your discs are returned. *info submissions only please – if you would like to send something to, say, *Pic of the Month* your submission will be dealt with more quickly if posted separately.

Compatibility table

Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
Flyng	No	No	Yes
Flynghi	No	No	Yes
Gouraud	No	No	Yes
Gouraudhi	No	No	Yes
Dangle	Yes	Yes	Yes
Taylor: !Tunnel	No	Yes	Yes
Madams: Plasmatin	No	Yes	Yes
Jeffs: Raytun	No	No	Yes
Boham: 4	No	Yes	Yes
Adcock: Funel4	No	Yes	Yes
Adcock: Plug Hole	Yes	Yes	Yes
Poodle	No	Yes	Yes
Soxon	Yes	Yes	Yes
Magic	No	Yes	Yes
1kgame	Yes	Yes	Yes
1kgame1	Yes	Yes	Yes
Sniggle	Yes	Yes	Yes
TVFuzz	Yes	Yes	Yes
blulitenin	Yes	Yes	Yes
fluff1	Yes	Yes	Yes
fluff2	Yes	Yes	Yes

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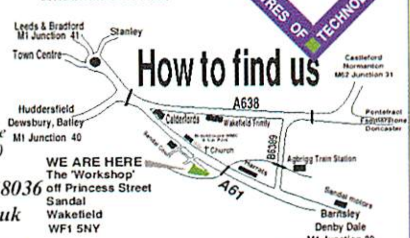
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Break out your mouse

A twitch to switch – **Mike Cook** explains all

This month's project is all down to Marcus Foreman. He suggested it would be useful to have a foot-operated mouse button control. I don't know about you but when I have had a hard day at the computer my wrist is quite aching. This stems from the fact that when you are using the mouse your whole hand is tense, especially if there is a lot of dragging to do. The tendons in the arm exert much more pressure than is necessary and it is difficult to relax, especially when you are trying to exert very fine control. I know you can adjust the mouse travel/pointer ratio to help this but it doesn't eliminate the problem.

If it were only the problem of a small ache it would not be so bad, but if this continues for any time you are in danger of developing RSI (repetitive strain injury). This is a very painful complaint where even the smallest movement can cause pain and swelling. The way to avoid this is in the name – reduce the repetitiveness and reduce the strain. There can also be a problem of mouse control with certain types of physical handicaps. In this situation, an alternative to the mouse buttons would also be handy. With these considerations in mind it really can be a worthwhile project.

Electronically it's not very challenging – in concept at least. All we need to do is to wire a switch across the original mouse switches to earth. The difficult part is in actually achieving that end. It's not very practical to wire across the original mouse switches because you'll then have two cables coming out of the mouse.

A lot of the handling characteristics of a mouse stem from the flexibility of the cable. When my first rodent broke, way back in 1985, I replaced the cable and effected an electrical cure. But the new cable made the mouse most difficult to control, so having two cables would really mess things up.

What we need is a mouse break out box. The term 'break out box' is normally used in conjunction with the RS232 standard where a break out box allows you to alter the wiring and pin out connections in a cable. My *mouse* break out box consists of a plug on the end of a flying lead connected to a socket. The plug fits into the computer and the mouse plugs into the socket, thus allowing access to all the electrical connections.

It's not the most complex circuit I've done – see Figure I. Most of the wires from the mouse are simply passed through to the computer. However, the mouse switches are connected through shorting links to the computer and also go to the external mouse switches. The shorting links are an option – when you have them and they are open, the switches on the mouse are no longer operative. With them made or not inserted, the external mouse button will work as well as the external ones, in what is known as a wired OR configuration. This means simply that the switch will be seen as pressed if one OR the other switches is pressed. Note that there is absolutely no need to go for three external mouse buttons, if you are only interested in the select button just wire that one up.

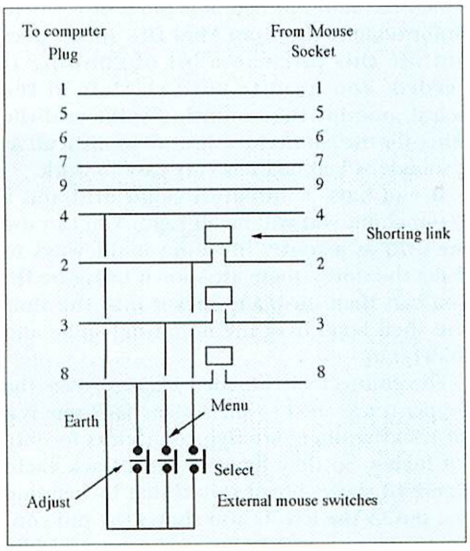


Figure I: The mouse break out box

As you can see the circuit is simple. What makes this project a bit tricky is the construction. Mini DIN plugs and sockets are not the easiest thing in the world to handle – you will need a fine-tipped soldering iron and a steady hand. The first thing is to make the flying lead with the plug on it. Figure II shows the connections looking into the back of the plug: wire up a 9-way cable to this. Unfortunately it is easier said than done!

The back of the plug has short stubby connectors with no hole to insert the wire. I found the best technique was to strip a very small section of the insulation off the wire, about half the length of the stub. Then tin both the stub and the wire, and finally place the wire alongside the stub

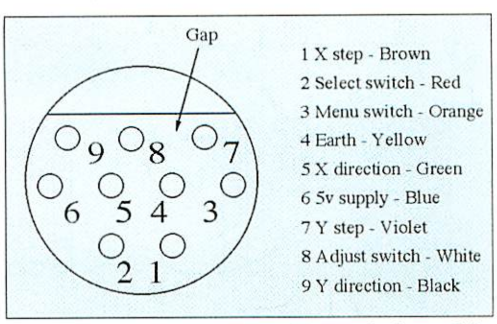


Figure II: Looking at the front of the socket or the back of the plug

and apply the iron. *Tinning* is the application of a small amount of solder and flux to a wire before you make a joint. You should always do this as a matter of course, but here it is vital or the wire won't stick.

Use the colour code shown in Figure II to make life easier later on. When you have soldered all the wires on the back of the plug, the metal tube needs fitting over the top. Note the three indentations in the plug and line them up with the corresponding bumps in the tube – you will need to push from the back with a small rod or round file to get the plug over these bumps. Be careful not to bend any pins and check the lead after for the appearance of any short circuits.

At this point you can fill the back of the metal tube with silicon rubber to prevent any stress fractures occurring at the solder/wire interface. It only remains to fit the rubber sleeve over the plug. However, this is too fat to fit into the recess of the computer. Therefore a small ring must be cut off the sleeve – use a sharp knife to cut back about 5 mm to the point of the arrow printed on it.

That's the most difficult part out of the way but there's still a tricky bit to come. Most electronic prototypes are built on Veroboard which has holes drilled at a pitch of 0.1inch. Unfortunately the 9 pin Mini DIN socket does not use this pitch so a bit of cunning is needed. You need to cut two slots in the board, one for the mounting spike and the other for the connectors. It's not as difficult as it sounds as Veroboard is very easy to work.

If you have a miniature hand drill and a 1/16inch bit you will be all right. You can use the drill as a router, pushing it sideways to make the slots – these are shown in Figure III. You can then push the socket into the slots and then bend over the mounting spike and solder it up.

The connectors can then be bent over the copper tracks next to them. The back row is a bit tricky as there are five connectors in only 0.4 inches, so they haven't got a track each. Figure III shows how I solved that by bending one pin to the left. It also shows the pin connections you will have at the base of the socket.

The next step is to mount the shorting sockets and the flying lead – this is shown in Figure IV. You can't just solder the wires from the lead up to the board because any mechanical flexing will cause a stress fracture at the point where the multi-stranded wire and the solder meet. What you have to do is to anchor the cable with two strips of tinned copper wire. Wrap this tight round the cable and solder the back of the board. As you solder, the heat will travel up the wires and melt the outer insulation, cutting a fine groove in it and holding it firmly in place. This is a technique I have used many times and it is always successful. Also, break the track in the four places indicated on the back of the board.

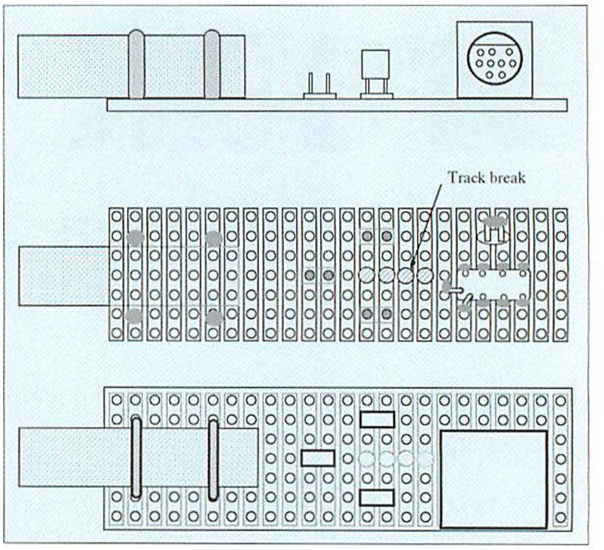


Figure IV: Ready to wire up

You are now ready to wire up the board – Figure V shows you where the wires go. If you've kept to the colour code in Figure II you should be able to follow the colours in this figure – assuming they are printed correctly! Take the earth connector and the external mouse switch leads and wire them up to the foot switches. And, as they say, Robert is your mother's brother.

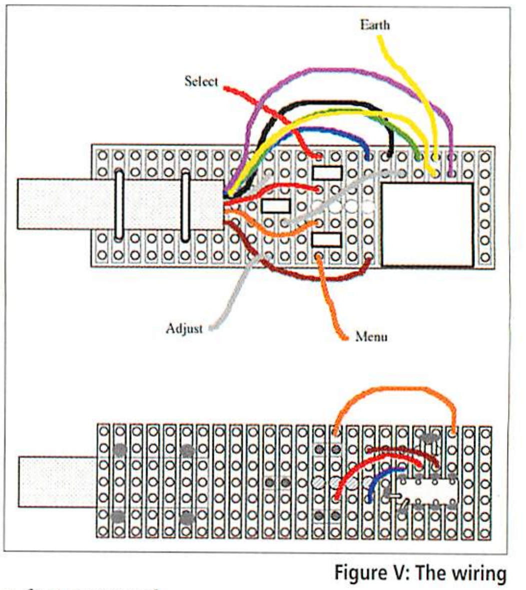


Figure V: The wiring

All the parts are available from Maplin, along with a selection of foot-operated switches – be sure to choose the momentary contact type. The foot switches should be mounted in a metal die cast box, suitably spaced so that you can easily distinguish them. There is no need for this to be just a foot-operated switch – you can make the external switches into micro switches and use a small box operated by the other hand. You could use throw switches or push-on/push-off type switches to save having to drag with the button pressed.

If you really want to let your imagination run riot you can use other sorts of switches. For example, how about using mercury tilt switches strapped onto your upper leg? A small twitch and you have pressed Select. You could even use non-contact switches like infra red beams or proximity switches.

Now your mouse has broken out there's just no stopping it. AU

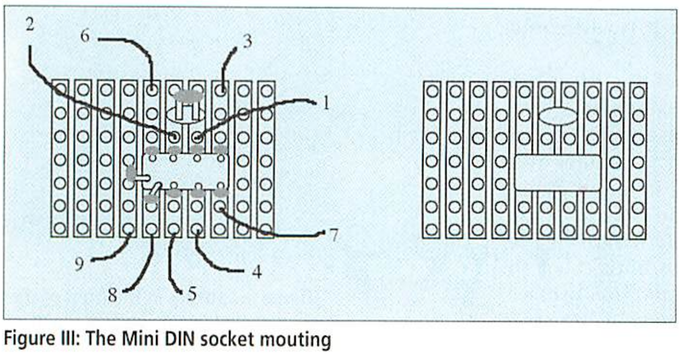


Figure III: The Mini DIN socket mouting

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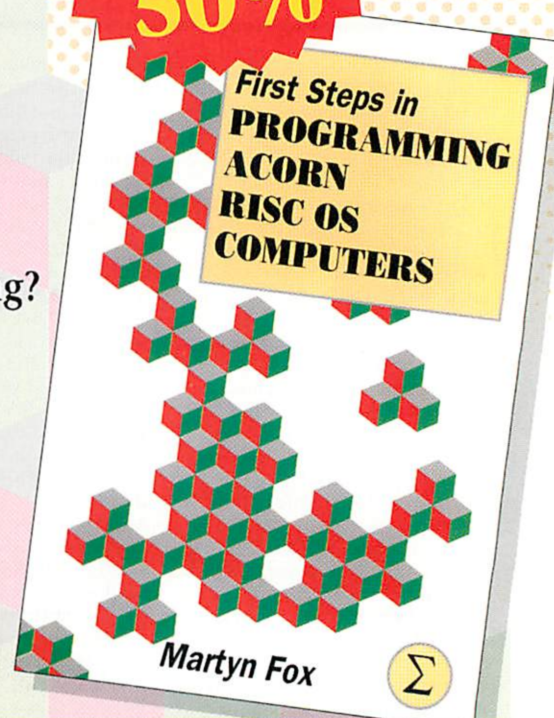
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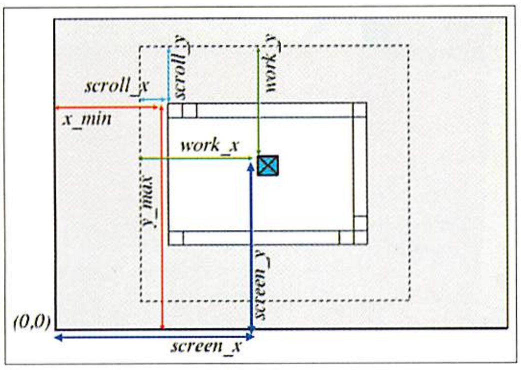
JACK KREINDLER

C for yourself

Mastering manual screen redrawing – **Steve Mumford** explains

As I mentioned in passing last time round, a crucial part of the window-redrawing process involves the translation of internal coordinates relative to the workspace of a window into points that fit within the standard boundaries of the screen. For instance, imagine a window containing a solitary sprite. Its position is measured from the top left corner of the window's workspace as a pair of x and y displacement values (so x tends to be positive whereas y is negative).

However, because the window may only be displaying a portion of its workspace at any one time, several more parameters have to be used to describe its appearance on-screen.



We need to record the offset between the top left hand corner of the workspace and the first pixel that's actually visible through the window, and finally we need to know the coordinates of the top left corner of the window, as measured from the bottom left corner of the screen. Take a look at the diagram; it should help to make things a little clearer.

In order to convert from workspace coordinates to screen coordinates, we can use the following relationships:

```
screen_x = work_x - scroll_x + x_min
screen_y = work_y - scroll_y + y_max
```

In the example on the cover disc I've used these equations within the redraw_window() function to calculate the screen coordinates for five sprites so they can be plotted at the same position relative to the window's work area no matter where the window may be on screen. Conversely, to convert a screen coordinate into one relative to the work area, the relationships can be rearranged to give:

```
work_x = screen_x + scroll_x - x_min
work_y = screen_y + scroll_y - y_max
```

The blocks returned by the Wimp_RedrawWindow and Wimp_Get Rectangle system calls share the same format. On entry, register 1 should hold the address of the data block, and the first word of that block (bytes 0 to 3) contains the window handle.

Normally Wimp_Poll has filled this in so it's a matter of calling Wimp_Redraw Window with the returned poll block. When the system call returns, register 0 is set to indicate whether another redraw is necessary, and if it's set to zero, no more areas of the window need attention.

The next four words in the data block (from bytes 4 to 19) contain the minimum x and y values between the screen origin and the window in question, followed by their maximum values.

The two words that follow (bytes 20 to 27) hold the x and y scroll offsets. Using the au_bytetoword() function, that converts four bytes from a raw data block into a C long integer, we can collect the values we need for the above equations as follows:

```
x_min = au_bytetoword(pollblock, 4);
y_max = au_bytetoword(pollblock, 16);
scroll_x = au_bytetoword(pollblock, 20);
scroll_y = au_bytetoword(pollblock, 24);
```

The last four words in the block (from bytes 28 to 43) store the minimum x and y screen coordinates, followed by their maxima, of the current rectangle being redrawn. After calling Wimp_GetRectangle, the graphics window is set to enclose this rectangle, so anything plotted outside those coordinates won't actually appear on screen.

If your task is complex and redraw speed is an issue, take a note of these values and only redraw those objects in the window that fall within this range, making the whole process that much more efficient.

The example application on the cover disc performs one other useful function – the function wimpmsg() listens out for the MESSAGE_MODECHANGE WIMP message, and upon hearing it, the program recalculates the pixel translation tables being used to plot the sprites in the window.

All this means in practice is the sprites are plotted properly no matter what screen mode is being used, and if a mode with fewer colours than the source sprite is used, colours are picked from the reduced palette as appropriate. A simple function is provided to make the process of building a translation table easier – once a block of memory has been set aside, a call to build_translation_table(), with the name of the sprite and the location of the buffer, will do it all:

```
unsigned char translation_buffer[1024];
build_translation_table("testspr", translation_buffer);
```

That's about it for this month, but now we've broached the subject of manual screen redraw, there are many more problems we can tackle. I'll be examining some of the possibilities next time. AU

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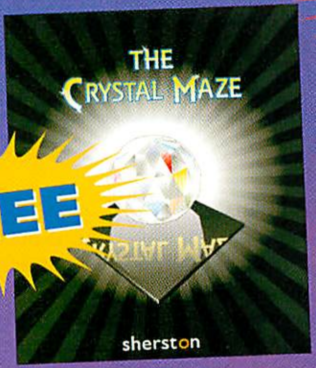
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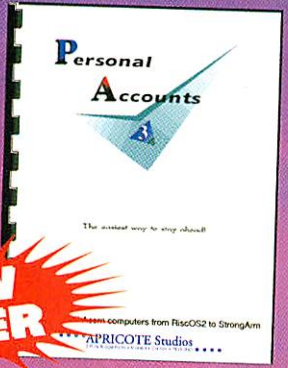
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ArmSwitcher review

Mike Saxton of ACE felt that the review of the ArmSwitcher in last issue, despite the praise, gave a generally negative impression. In response to his comments here is a letter from the reviewer:

Any product, from a chocolate bar to a Cray computer has to be assessed on whether it delivers value for money to the purchaser – a sometimes complex equation which demands that the buyer assesses his/her need, whether the product will meet that need, the price and, quite frequently, the longevity of the product.

My final paragraph was intended to ensure the user ran through those questions because, as I wrote, with the ArmSwitcher I cannot make that decision for anyone else as the device clearly works but simply may not be appropriate to an individual. Thus for some that might result in buying the product when they don't need it. For others it will mean it definitely is worth buying. With this product, more so than with most others I can think of, that decision must rest on personal circumstance and needs.

If people decide it fulfills their immediate needs, then I can happily recommend the ArmSwitcher. As for its long-term viability, that should that be an important consideration for potential buyers, I for one look forward to the plans you have for the extra expansion slot.

I can assure you that it was not my intention to damage the product or its chances by being negative about it. For many people the product will fulfill a need and I did not intend to put them off.

Mike Buckingham
Acorn User PC Page Editor

A zip in every port?

In the April *Acorn User* (Issue 180) there was a write up on the Argo Iomega Zip Drive but it is not clear whether the Drive will work from the parallel printer port on my 420/1 (Watford IDE interface).

I understand that the printer port is unidirectional. If this is correct is there perhaps a body building project by Mike Cook for a bidirectional parallel port? I have all the Acorn User and *Micro User* magazines from issue 1.

In the May Acorn User magazine (Issue 181) there was a special reader offer which also implies that the drive will work on all machines.

Reg Hems
reghems@argonet.co.uk

Will Acorn become a world beater?

I have recently become interested in the Netstation, which I believe is an excellent budget device, but I am having difficulty acquiring information about compatibility and other issues. It seems to me that Acorn have found the ideal device with which they have the opportunity to make themselves a household name.

It could also do wonders for the sale of Acorn Desktops, as once people have used the NC for browsing, or even ported RISC OS applications at home, they may well want to upgrade to a more powerful desktop machine, such as the forthcoming Risc PC II. I know that the NC is still in its infancy, and that commercial applications will not be available in their tweaked form for NCOS for some time, but it would be helpful if the developers could, via their Web site and e-mail, or even through this magazine, give us users some insight into whether their applications will be ported to the Netstation.

As the NC becomes more widespread, as both a corporate, and home system, surely we cannot afford to miss the bandwagon. By making as much RISC OS compliant software as possible available for the Netstation, Acorn and the major software developers have a chance to get millions of people using an Acorn device, even if it is a budget system. It will increase awareness of what can only be described as a remarkable platform.

It's high time Acorn's became an industry standard, instead of the ageing PC, and it is

my opinion that the affordability of the NC as a home machine, combined with the software base of RISC OS could truly transform Acorn into a world beater.

Gareth Woolridge
Gareth@ragga.force9.net

I'm not being very sarcastic when I say I'm glad you realise that — I really wish most Acorn third-party software developers would. Some haven't made it widely known that they are working on the problem. This is the opportunity of a (business) lifetime and we must take advantage of it.

However you are not entirely correct to say it will make Acorn a household name. That's fairly unlikely since the machines being built are, for the most part, being built by companies who put their own name on the outside, whether it's Samsung, Green Technologies, Daewoo or maybe even BT. Acorn may have their *"at heart"* logo, which is good, but it won't make them a household name.

Cynics anonymous

I have become more cynical over the last year or so as to the benefits of sticking with the Acorn platform. Originally, when I bought an A3000 in 1991 as a student. Acorns and Arc software seemed infinitely superior to PCs - faster, more refined, upgradable and affordable. I have since progressed to a two slice StrongARM Risc PC, which I still prefer to PC or Mac. However, recent events and observations have caused me to wonder whether it's worth continuing this devotion.

For the last year at work I have been using MS Windoze NT 4 and Office on a Pentium, The setup was much more stable, fast and powerful than some Acorn fanatics might think, admittedly due to ridiculous amounts of (now very affordable) drive space and RAM. The interface of Win 95 (and NT 4) now look so close to RISC OS, and the price of PCs, hard drives, memory and PC software has come down so much, that the benefits of owning an Acorn now seem less obvious.

There were a number of things at the Wakefield show that made me wonder how Acorn and its third party software developers will progress. Firstly, the talks by Chris Cox and Peter Bondar implied that Acorn's priority is now (understandably) designing products to meet the requirements of their new clients, and that the products that we, the loyal customer base, will get depends on these other developments.

My second observation at the show was at the Computer Concepts stand, where I was told that development on *Impression* and *ArtWorks* has finished, and that ArtWorks has only recently paid for itself relative to the number of copies sold. This is worrying. It makes decent Acorn software seem all the more impressive, but asks the question how many new complex software products we will see in the future, Finally, it seems that various Acorn developments, such as frames in Web pages, depend on what the PC world decides and that we have to wait a few months to get these features, if we ever do!

So I need my enthusiasm for all things Acorn re-kindling, like never before!

Daniel Salter
Southwell, Notts

Well, I use Windows '95 myself occasionally, and I can't disagree more about the *similarity*. There is a superficial resemblance but all the fuss, for example, about the W95 iconbar — it's not a bit like the RISC OS iconbar, it's function is not the same.

Yes PC hardware prices continue to fall, prices usually do, but the really low cost hardware is generally not worth buying. Cheap hard discs, cheap CD-ROM drives and so forth are not good investments, and cheap machines mean no backup when things go wrong. I know of two specific cases where families bought PCs and they would not work when they were put together.

If you want reliable PCs and the kind of support you get (free) from Acorn dealers, you'll be paying the same, if not more than an equivalent Acorn machine. And you'll be paying for the software support.

You must also consider this; you are a person who understands computers and if something goes wrong you'll have a pretty good idea what it is and be able to fix it. This is not the case for the majority of PC buyers; PCs go wrong more often than Acorn machines and when they do the trouble tends to be much worse.

But I realise I won't enthuse you by "doing down" the opposition — it's just too easy anyway. What does Acorn's future hold?

As I have said before (lots of times, doesn't anyone listen?) it is not in Acorn's interests to stop supporting their retail market, it is an important part of their sales pitch "...and look, here are millions of people using the hardware and software on a daily basis."

We have the portable coming, we have the Risc PC II coming and we have the amazing new operating system.

Acorn's retail sales are on the up. There are more Acorn users every day, individual companies like Sibelius and Eidos are pushing Acorn into niches where people want power and reliability — internationally. The Acorn music scene, apart from Sibelius, is set to replace the Atari which is finally dying out.

ters

There is a huge potential sitting there in the future and we're all a part of it.

Alexander info

In response to the query in the Letters column (June 1997) from Gary Hughs regarding a package named "Alexander" I looked in a copy of the 1992 Acorn Product Directory and found the following contact information for the company in question:

International Institute for Aerospace Survey and Earth Sciences, Image Processing Lab, PO Box 6, 7500 AA, Enschede, The Netherlands, Tel +053 874444, Fax +053 874400

The package in 1992 had an RRP of £650 exc VAT. All I can suggest is that you contact the company for further information. While I realise this information might be outdated I hope it helps Mr Hughs.

Sam Cave
sam.cave@argonet.co.uk

Thanks very much for that, Sam.

the Regan files



Mike Saxton photographed by Jill Regan

Just outside Dortmund city centre is a tower, and at the top of the tower is a revolving restaurant. Some say that the tower is a paradigm of German engineering and efficiency.

Therefore it comes as no surprise that when the computer 'techies' in Germany come out to play, it is increasingly with an Acorn.

At least, that's according to Mike Saxton, who is one of the MDs of Acorn Computer Enterprises (ACE), a company based in Dortmund. ACE is both a dealer and a developer – if you were at Wakefield you may have seen their customised Risc PC cases.

'ACE is split into two,' reveals Mike. 'I do the hardware and my partner Dr Ulrich Wittig does the software. We have designed our own 32-bit SCSI card, we produce MIDI interfaces and we have just brought out the ArmSwitcher, so people can switch to and from their StrongARMs.'

'I am an Acorn convert. I started my original company back in 1985, and I was an Atari freak then. Atari went down and so I had to look for a viable system, not just for me, but for my livelihood. The Acorn was the only machine I found that could provide me with everything I wanted.'

Mike's first aim was to make sure there was such a thing as a German market and that it would be viable. Acorn Computers Ltd pulled out of Germany a couple of years ago, closing its German office and leaving the dealers to fend for themselves. Mike has been building up the German market and has ensured that the name Acorn is used all over the place. Other names have helped him achieve this – one is *Sibelius*.

ACE is Sibelius Software's main distributor in Germany, Switzerland and Austria. When I spoke to Mike, he was fresh from the Frankfurt music show. Frankfurt is the world's biggest music show – a seven day affair which is spread over 10 halls with everything musical you can think of. The response to Sibelius and hence Acorn was amazing, and this interest ranged from major composition houses to the home user.

'One of the fun sales I made was to a man from the Royal Tank Regiment's military band. He had heard about Sibelius and came to see us. He left with a very nice Risc PC system complete with Sibelius'.

So computer music technology has even reached the staid echelons of the brass band world – Brighouse and Rastrick next perhaps?

Mike's connections with the army go further than a brass band wanting to computerise its music.

> **'The problem with the computer market in Germany is that the PC market has killed itself by offering people cheap deals.'**

He was in the British army for seven years, based in Germany, but the only information he'll vouchsafe about this period of his work is that he learned to box. Boxing lead to having a well-toned body, and Mike at one point modelled swimwear (not on the catwalk though, only magazine and catalogue work). He cites Acorn's reliability as a key selling point in Germany. 'When I sell an Acorn I know that the customer is going to get it home and it is going to work. My priority is keeping the customer happy – if the customer is not happy, then they are not going to do any free verbal advertising to their mates for me. Plus I like to think I am selling them a service, not just a computer.

'The problem with the computer market in Germany is that the PC market has killed itself by offering people cheap deals. Macs are very expensive. The Acorn is cheap in comparison and there are German versions of many of the software titles.'

Germans (understandably) prefer to buy software in German. While a lot of the major software on the Acorn is in German, there could be more.

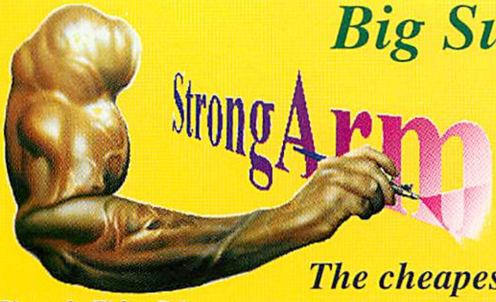
'These are the points that people should wake up to. All the major recording studios in Germany use Ataris. These are potential customers who are hanging on to the last minute because they do not want to buy PCs. With a bit more energy put into doing hard disc recording, studio work and MIDI, we could have this market sewn up.'

The thing that would *really* make Mike's day would be a single European currency. This is something he has to deal with on a day-to-day basis.

Even things as simple as a price list are a constant headache, because they alter every time the pound/mark exchange rate alters. With a single European currency Acorns would be the same price all over Europe, making them much more competitive with respect to US imports.

All of which would be good news for the British computer firm, doing well in Germany thanks to Mike Saxton's engineering and efficiency.

Jill Regan AU



Picture by Walter Briggs using Studio24Pro

Big Summer Price Reductions

RED prices = at least 10%
RED '★' = at least 25% !

StrongArm RiscPCs



The cheapest way to buy the RiscPC of your choice. Let Pineapple install the upgrades you require into a basic StrongARM RiscPC and save money!

StrongARM RiscPC Base Price - £ 1099.00 inc vat

General Upgrades

CDRoms

x8 speed CDRom	£ 50.00
x12 speed CDRom	£ 75.00

Harddrives - exchange prices

1.7Gb Harddrive	£ 99.00
2.5Gb Harddrive	£ 129.00
3.8Gb Harddrive	£ 199.00
5.1Gb Harddrive	£ 299.00

Other sizes available - please ask

Backplanes

2 slot backplane	£ 34.00
2nd Slice (inc 4 slot backplane)	£ 89.00

Memory Upgrades

1Mb VRam	£ 80.00
2Mb VRam	£ 115.00
8Mb SIMM (12Mb Total)	£ 39.00
16Mb SIMM (20Mb Total)	£ 59.00
32Mb SIMM (36Mb Total)	£ 125.00

Other sizes available - please ask

PC Cards & Software

DX2-66 PC Card	£ 169.00
DX4-100 PC Card	£ 229.00
586-100 (or 133Mhz) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
Windows 95 (Installed for you)	£ 79.00

Monitors

Acorn 14" AKF60	£ 264.00
Acorn 17" AKF91	£ 639.00
Acorn 17" AKF93 (See offer)	£ 423.00
Iiyama 17" 8617E	£ 515.00
Iiyama 17" 9017E Pro	£ 549.00
CTX 14"	£ 189.00
CTX 15"	£ 279.00
CTX 17"	£ 449.00

Internet

33,600 Ext Voice Modem BABT	£89.00
33,600 US Robotics Voice	£169.00
Ant Internet Suite software	£116.33

Acorn FREE Gifts!

Option 1 - Home s/ware. DK Ultimate Human Body, Multimedia Textease, Artworks. OR Business s/ware. Easiwriter, Eureka 3, Datapower.
Option 2 - Acorn 17" AKF93 monitor for the price of the Acorn 14" AKF60
Option 3 - Canon BJC4100 colour printer
Option 4 - Casio Digital Camera QV10a complete with software and cables.

Pineapple FREE gifts

With every new RiscPC you receive -
1 year subscription to the Virus Scheme.
Studio24 Art & photo-retouch software.

20:20 Finance available on all RiscPCs (subject to status). 20% deposit and 20 monthly payments at 0%

Flatbed Colour Scanners



There are now a growing number of scanners which will work on RiscOS. Most of these need a SCSI interface though, so the Epson GT5000 parallel is still our most popular model. A new inexpensive parallel port scanner which works just on the PCcard is now available at £169.00 !! All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI connecting cable.

Epson GT5000 parallel	★ £299.00
Epson GT5000 SCSI	★ £349.00
Epson GT8500 par&SCSI	£459.00
Epson GT9500 par&SCSI	£599.00
Umax Vista S6E - SCSI	£269.00
Umax Astra - SCSI	£269.00
Agfa Snapscan - SCSI	£259.00
NEW - Trust (parallel) ★★★	£169.00

SCSI Cards & Cables

Powertech SCSI II Card	£189.00
50 mini 'D' to 50 Centronics	£19.00
50 mini 'D' to 25 'D' plug	£19.00
25 'D' plug to 50 Centronics	£16.99
50 Centronics plug to plug	£15.99
50 Centronics plug to skt	£16.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
Parallel 3 way	£19.99
Parallel 4 way	£19.99
25 'D' plug to 25 'D' plug	£4.99
25 'D' plug to 36 Centronics	£4.99

Hard Drives



Pineapples removable drive system is available for both IDE and SCSI systems. Provides total data protection!

IDE mounting kit (inc cable)	£15.00
IDE removable case	£10.00
SCSI mounting kit (inc cable)	£19.00
SCSI removable case	£10.00

Bare IDE harddrives

1.2Gb IDE	£145.00
1.7Gb IDE	£158.00
2.0Gb IDE	★ £169.00
2.5Gb IDE	★ £179.00
3.2Gb IDE	★ £209.00
3.8Gb IDE	★ £249.00
4.3Gb IDE (Fireball ST)	★ £319.00
4.3Gb IDE (Cyclone 5.25")	£239.00
5.1Gb IDE	£349.00
6.4Gb IDE (Fireball ST)	★ £399.00

IDE Expansion

x4 IDE Expansion card	£69.00

Bare SCSI harddrives

1.0Gb SCSI	£169.00
2.0Gb SCSI	★ £329.00
3.2Gb SCSI (Quantum ST)	★ £289.00
4.2Gb SCSI	★ £459.00

Studio24Pro

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'- *Acorn User Mar96*

Now just ★ £99.00 ★

Users note FREE update v2.16 is now available.

PAL TV Coders



We have a range of PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. All models have S-VHS as well as standard video outputs. Please ask for more details.

PLC/3 PAL Coder	★ £79.00
AVK/3 PAL Coder	£289.00
AVK/5 PAL Coder	£379.00
Monitor adapter 9-15pin	£4.11
Monitor adapter 15-9 pin	£4.11



Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.

Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple Software can help you with ALL your Acorn computer related problems.

Colour Printers



Canon BJ30 - portable mono	£159.00
Canon BJC70 - portable col	£199.00
Canon BJC240 - promo pack	£169.00
Canon BJC620 - colour	£289.00
Canon BJC4200 - promo pack	£209.00
Canon BJC4550 (A3)	£364.00
Canon BJC5500 (A2)	£698.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 400	£219.00
Epson Stylus Colour 600	£279.00
Epson Stylus Colour 800	£399.00
Epson Stylus Colour 1520 (A3)	£729.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 6L	£399.00

Other Items

Artworks video tutorial	★ £14.99
Casio QV10a Digital Camera	£376.00
Casio QV100 Digital Camera	£528.00
Sibelius 6 software	£180.95
Sibelius 7 Student	£493.50
Sibelius 7 software	£940.00
Studio24 version 1	£35.00
Acorn Netstation (Ethernet)	£467.00
Acorn Netstation (Modem)	£467.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

Pineapple Software

352 Green Lane, ILFORD
Essex IG3 9JS
Tel 0181 599 1476 Fax 0181 598 2343
email:- sales@pineaple.demon.co.uk
www:- http://www.pineaple.demon.co.uk

Terms:- All prices *include* 17.5% vat. Carriage £15 on computer systems. £5 on all other hardware. Other items free. Phone for quote outside UK.Official orders, cheques and all major credit cards accepted at no extra charge.

'Pineapple offer some of the finest and friendliest after sales support you will find' - Acorn User Mar 96
Why not come and visit us (easy parking) where you can see most of the Acorn range of computers and other hardware in action.
Monday - Saturday 0900 - 1730

Centres of Technology Acorn Centres of Technology


Completing The Jigsaw
Puzzled by the complexities of networking?
Atomwide can help you out. From a two workstation peer to peer network, to a very large site comprising hundreds of network points.
Atomwide have been designing and building networks for many years now. We can help you every step of the way, to ensure that your network is assembled correctly right up to the last piece in the jigsaw.
All Atomwide networks are designed to IEEE802.3 specifications giving you the choice of using both Acorn and other industry standard equipment. All installations, software training, and aftersales hotline support are carried out by our fully qualified team of experts.
Contact us now for a network quotation designed to meet your specific requirements.
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